

FEVDIGRAPHIA.

THE SYNOPSIS
OR EPITOME OF
SURVEYING ME-
THODIZED.

Anatomizing the whole Corps of the
Facultie; *Viz.*

*The Materiall, Mathematicall, Mechanicall and
Legall Parts,*

Intimating all the Incidents to Fees and Possessions, and
whatsoever may be comprized vnder their Matter, Forme,
Proprietic, and Valuation.

*Very pertinent to be perused of all those, whom the Right, Reuenue,
Estimation, Farming, Occupation, Manurance, Subduing,
Preparing and Implying of Arable, Medow, Pasture, and all
other Plots doe concerne.*

And no lesse remarkable for all Vnder-takers in the Plantati-
on of Ireland or Virginia, for all Trauailers for Discoueries of for-
raine Countries, and for Purchasers, Exchangers, or Sellers
of Land, and for euery other Interestee in the Profits
or Practise deriued from the compleate

SURVEY

*Of Manours, Lands, Tenements, Edifices, Woods, Waters, Ti-
tles, Tenures, Euidences, &c.*

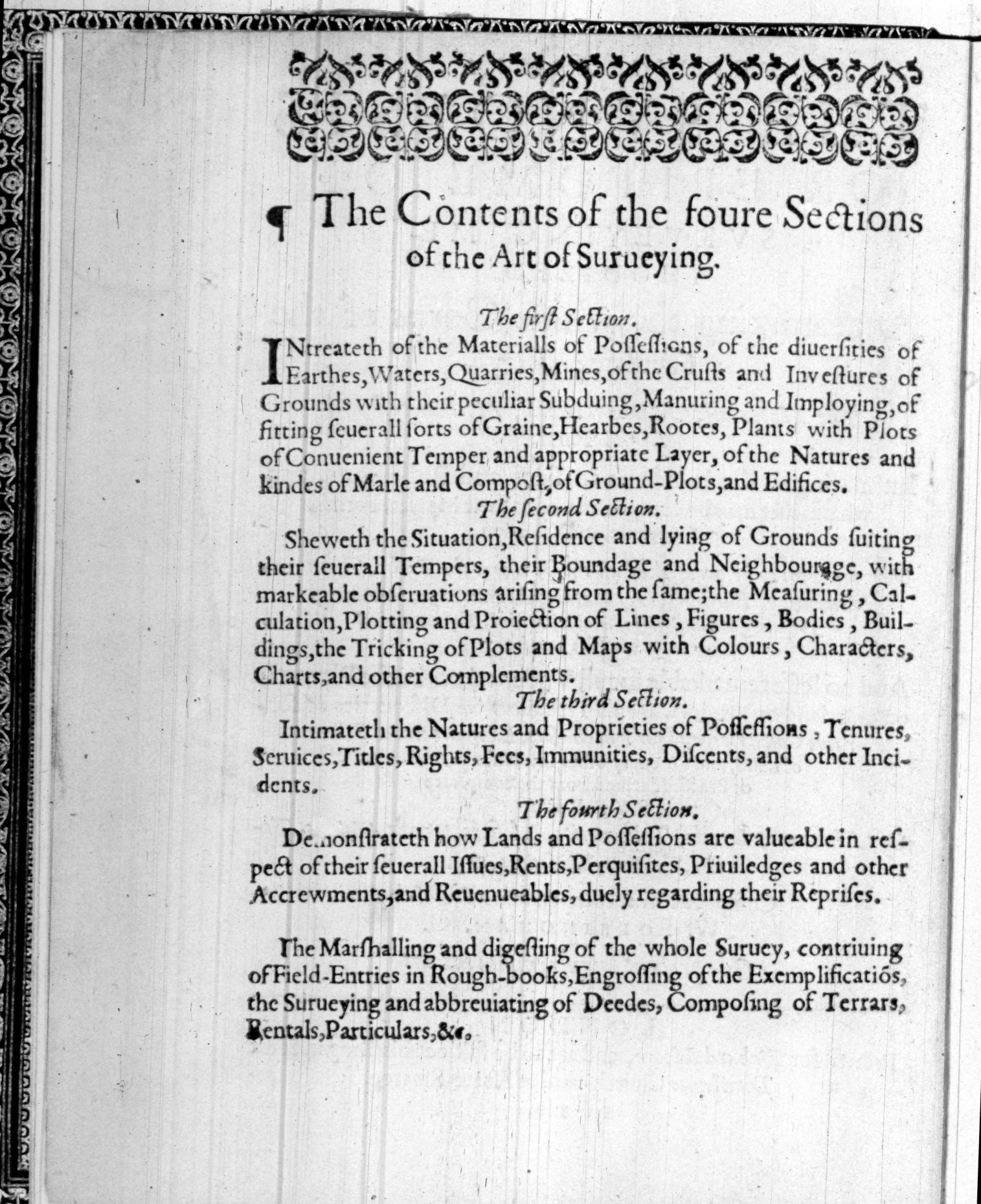
Composed in a compendious Digest by
W. FOLKINGHAM, G.

Quæ profunt singula, multa iuvant.

LONDON

Printed for Richard Moore, and are to be solde at his shop in Saint
Dunstons Church-yard in Fleete-streete.

1610.



¶ The Contents of the foure Sections of the Art of Surueying.

The first Section.

Intreateth of the Materialls of Possessions, of the diuersities of Earthes, Waters, Quarries, Mines, of the Crufts and Investures of Grounds with their peculiar Subduing, Manuring and Imploying, of fitting seuerall sorts of Graine, Hearbes, Rootes, Plants with Plots of Conuenient Temper and appropriate Layer, of the Natures and kindes of Marle and Compost, of Ground-Plots, and Edifices.

The second Section.

Sheweth the Situation, Residence and lying of Grounds suiting their seuerall Tempers, their Boundage and Neighbourage, with markeable obseruations arising from the same; the Measuring, Calculation, Plotting and Proiection of Lines, Figures, Bodies, Buildings, the Tricking of Plots and Maps with Colours, Characters, Charts, and other Complements.

The third Section.

Intimateth the Natures and Proprieties of Possessions, Tenures, Seruices, Titles, Rights, Fees, Immunities, Discents, and other Incidents.

The fourth Section.

Demonstrateth how Lands and Possessions are valueable in respect of their seuerall Issues, Rents, Perquisites, Priuiledges and other Accrewments, and Reuenueables, duely regarding their Reprises.

The Marshalling and digesting of the whole Suruey, contriuing of Field-Entries in Rough-books, Engrossing of the Exemplificatiōs, the Surueying and abbreviating of Deedes, Composing of Terrars, Rentals, Particulars, &c.



To the Right Honourable and most
Noble Lord, WILLIAM Lord
Compton, Baron of Compton, Nestors
yeeres, with the felicitie of both
Worldes.

TO deriue my inducements (*Right Honourable*) of
Dedicating these shallow Deseignes vnto a Meca-
n^{is} of such Supereminence, from Presidents of
worthy witts and particular Obligees to eminent
Patrons, my Fortunes haue not so auspiciously en-
deared me their happy Fauourite. But the Vniuersall concur-
rence of good Hearts with hearty zeale (from the Verge of a vast
extent) in the Center of true affectionated praise of your worth,
and prayers for your weale, hath hasted & haled on the whole Cur-
rent of my affections to runne with the Generall Concourse of un-
fained welwillers, to congratulate your Lordships hopesfull and hap-
pie Consolidations: For such and so manifold are those worthy
Attributes of accomplished Amplitude and magnified Merits
dimayning from the sacred Source of true Nobility, that they
haue euen winged my feruent Desires, (more animated with
self-approuement of deuote sinceritie then amazed with myrrors of
Magnificence) to the consecrating of these my prest Deseignem^{ts}
to your Honourable Patrocinie. But if such Motiues bee incompe-
tent to giue due Colour of excuse to Intrusions so exorbitant, I be-
seech

A 2

The Epistle Dedicatorie.

seech your Lordship giue me leaue to see to the prostrate Plea of praying your gracious Indulgence for my rude Presume in daring from the remote Nad'r of obscurity, to eleuate the flaggie Wing of so weake a Pincion towards the Zenith of Perfection, the mark and Pitch for Skie-towering Faulcons, whose Quills impied with strong Sarcells of the Grace of Greatnes, are inlisened and inhabled to transcende and climbe-aboue the mistie Vapours that cloude and Eclipse all Flights which peirce not to the Welkin of the Worthies. For who sees not that Heroes (Gods Vice-gerents) can dignifie euen the inglorious Groome, & giue such Gloss, and Tincture to home-made Statuaes, as shal attract the Eye of wonder to magnifie the potent Artists for refining & remoulding their (now) new creatures, as well as with the Touch-stone of refined knowledge detrud & banish all Deseignes, disfurnisht of true & due self-worth, from the Confinnes of high Repute? But least in labouring, with in-vulgar Ingredients, to palate an ill seasoned Seruice, I should by tedious and unrelished Tearmes, impart a worse distaste, I will screw-up this Key with the prostrate sacring of my selfe and my poore Endeauours at the Shrine of your gracious Clemencie. And so euer wishing vnto your Honour the happie fruition of unconfinde Felicity. I rest, now and euer,

London at the White Hart in
Cheape-side, Iunij. 6.

1610.

Your Lordships humbly deuoted.

W. Folkingham.

To the Benevolent and iudicious

R E A D E R.

ould I insist vpon tedious Appologies for due ap-
prouement of the Faculty of Surueying impugned by
the vulgar and shallow Disputes of refractorie Oppo-
sites, which absurdly transferring their hard Imputa-
tions against it, from the faulty and defectiue Abuse, to the iust
and lawfull Vse of the same, doe most iniuriously, and vniusly
traduce and scādalize this vnblameable Arte & all her Agents,
'tis hazard but I should heare of *Mindaes* Cynical *Memento*,
if I incurred no harder a Censure. It is a World to see the sot-
tish pressures vrged against the admeasuring of land, yet the Vse
of Ponderous and Concaue Measures (both Dry and Liquid) are
no lesse commendable than Common in venting of Wares and
Merchandize, and what greater iniquity in the vsing admeasure-
ments in Grounds than in Graine? Cloath and Stuffs were re-
tailed by the yard, when a sumptuous Potentate might be ho-
sed for 3 shillings, which now will scarce hose a frugall Peasant.
Bilanz est arbitrer equus; the Hand may faile in certaintie of
Poize, and the Eye in Randon sans Rule, but the Beame and
Chaine balke no Truthes, nor blanch Vn-truthes; the Empi-
rick or the Methodist, which is the better Phisician? Take away
Number, Weight, Measure, you exile Iustice, and reduce and
haile-vp-from Hell the olde and odious Chaos of Confusion.
Priuate Intelligencers, intimating (by their roaued Aymes at
Quantities and Qualities) vnder-hand and sinister informations,
abuse the Lessor & wrong the Lessee, where the iust and iudici-
ous Feudigrapher (who aymes at competent Improvements sans
pressure of the Feudatarie, or oppresure of the Fermor) duly
and discretely obseruing all particulars incident to the Plot, cer-
tifies a true Relation, by the Ieuel-draught of whose impartiall
Parallels, may be produced that Meane in Rating of Estimates,
which the due Port of men of Place and Eminence (no way sup-
portable (*Rebus sic stantibus*) with Renenewes of former Ages)
doth most iustly challenge. What should I speake of scanted
Estimates of Acres exacted from ouer-awed Tenants, or rated
by

The Epistle to the Reader.

a Feudi-
graphia
impostura
fit Pseu-
dogra-
phia.

Dware-
nus.

by positive Will? of the Ouertures of scandall raised against Surueyors by the Owners concealing of failing Contents, or vouching of Validities and Extents about the a Record? of letting by Port-faile aduanced by prepared out-bidding Competitors? of parcelling forth engrossed lands to Vnder-tenants at intollerable Termes? of Riot, Pride, Plenty of People & Coyne (though confined to a few Cofers) with high-enhauced Rates of all Commodities? who is so Owie-eyed that sees not, that the extending of Rents doth necessarily dimaine from these and the like causes? Yet Tenancies (I cannot gaine-say) are too oft tendered to too-Racking Valuations, the Reciprocall Regard (in some) is Choyse to take by Racke, or leaue a Packe, and it is so ordinary with too many Land-lords (like absolute Lords and Allodists of their Lands (within the Verge at least) *a superis ad inferos*) *Fundum hasta subijcere*, the frequencie of the practize growes familiar. And for Feudataries, who sees not how much they faile of true agnizing their due dependance vpon Mesne Lords, sith Feudum (comprehending Fealty (at least) which obliges *Per sacramentū sub pena foris factura Feodi*) is *Res Clientelaris*, & neuer deuolues to the Successor sans original Burthens imposed by him which had Nouel Fee, howsoeuer they now slight their Lords and amoundre their Obligence. *Sed hac parerga*; and to Rectifie such irregularities, the Field requires a better Champion, in the meane time let euery one for his owne particular propose vnto himselfe the entertainment of a good conscience. For this Tractate, I am not so arrogant to magnifie, nor so vnnatural to vilifie my own issue, though I could retrieve Centuries of Defects, but leaue it to thy fauourable Censure, crauing (withall) thy courteous tolleration of my new-coyning of some Words, with the Reuiuing of the obsolete and Enderizing of Forraine, sith without such priuiledge, an indigested *Chaos* of Principles and Conclusions cannot (*ex nouo & ex facili*) be concisely contriued into a Methodicall Arte. For any vaine-glories *Geodetor*, which makes base Detraction the Trumpet to rumour, and emblason his selfe-boasted perfections, so with facility to purchase (or rather fore-stall) the Palme of Repute,

Ore

The Epistle to the Reader.

*Ore & Dente petat, & naso suspensio huiusmodi effundat Scom-
mata:*

Quam lepidè lexeis composta ut tessera, omnes

Arte pavimento atq; Emblemate vermiculato?

What curious-quaint Emellishments diffuse?

Musaick-Mazes-Marquetrizing Muse?

Susq; deq; fero; who can be secured from base carping Blatancie? But wherevnto tendes this precise particularizing of Plots, Layers, Pregnances, Productions,&c. when an Arte-lesse Agent can (by famed Name, and absolute power to dispose) with the bare vouch of the generall goodnesse of the Ground (sans ground of Reason or Possibility) haile on the poore Pesant to Farme and Fine according to the braue boast of his roauing Esteemes & absurd Ostentations, which he daignes not (nor dare they vrge) by any rationall instances to make probable? I ayme not at the Racke nor the Slack, the qualified Meane is the Mainie of my Marke; and to extunde and beat-out this true Proportion, I obserue the Circumstances projected: let peremptorie Agents balke instance, barre Reply, and Racke sans Rule and Reason, it behoues an honest and faithfull *Fendigrapher*, by infallible Principles & warrantable Demonstrations, to approue himselfe, an intelligent and diligent-Improuer, not a senselesse and arrogant Impostor; and what warrant more current than Knowledge founded vpon the industrious search and serious obseruations intimated (or rather glaunced at) in this *Epitome*? But least too large Gates should promise a faire Plat-forme of a spacious Towne, hauing thus borrowed leaue to wade into the shallow Foordes of the Faculty, I will leaue the Profundities to be sounded with a Plumbe-line of more Poize and Fadomes.

*Helpringham neere to Folkingham the second of Fe-
bruarie, 1609.*

Velle pro Posse.

Thine W. F.

The Authorto his Feudigraphia.

WHen thus I had (by peice-meale paines) compilde
Of diuers Elements thy slender Bulkes,
I deem'de to haue (too ominously) stylde
Thy Name so neere the Pheud of Border-Hulkes,
That thy abortiue Limbes I rather chose
In close concealement from this captious Age
To smother ay, than rashly thus t' expose
To Pheudists Theonine thy Pusilage;
But a great Monarch hath those dire Combines
Hatcht in the Heart by Sauage Enion,
Calm'de with a Fame that happily Confines
All Opposites, to sacred Vnion:
So wert thou Patroniz'de by Celsitude,
The Cryticke-Coale should not thy Browes ybrand
For Dis-analogies strange, strained, rude,
Nor Deviations curious-ill-scande;
Guine then, O gaine (in Lieu of selfe demerit)
By heart-free Tender with true zeale replete,
His grac'd Aspect, who truely doth inherit.
A splendid Fame for worthynes Compleate,
To daigne the Patronage I (humble) craue
Of worthy Comptons Noble Family,
Whose iustly-honour'd Names Shield from Depraue,
Couch rabid Blatants, silence Surquedry:
Then Carping Momus wilbe euer-mute,
And rather Burst with Spleene, than vent his Gall,
The Mainger-Curre nil bawle (how-euer brute)
But crouching fawne, or leering voide the Stall;
Such Grace dimaines from sacred Eminence
Ay to suppressse insulting Insolence.

Et habent sua Fata Libelli.



THE SYNOPSIS OR EPITOME OF SUR- VEY METHODIZED.

SECTION. I.

Of the Materials of Possessions, the severall kinds of Earths, Waters, Stones, Minerals: the Crusts and increase of Grounds, the peculiar ordering, mastering, manuring and imploying of severall Soyles, the due bestowing of Graine, Herbs, Plants; with the diuersitie of Ground-plots and Edifices.

CHAP. I.



Survey in generall is an Art whereby the view and trutinate intimation of a subiect, from Center to Circumference is rectified.

The Survey of Possessions (the subiect of this Treatise) is the Arte by which their Graphi- call Description is particulari- zed.

B

This

This Suruey is Symbolized and distinguished into Actiue and Passiue.

Actiue. The Actiue may be referred to the Feudigrapher, and consists in Operation and Estimation.

The Operation is Mathematicall and Mechanicall.

Mathematicall. Mathematicall Operation is a part of Suruey by which the dimensions of the Plots propounded are performed.

Mechanical. Mechanicall Operation is the Manuall acting and protecting of the Workes.

The Estimation of Possessions is Materiall & Legall.

Materiall. The Materiall part is conuersant in Estimating the valuations incident to the subiect, by relation to the Materials, and Elementarie parts of the Plot.

Legall. The Legall part prescribes Methodicall & Iuridiciall confines to the whole course of Suruey: and comprehends the Symboliographie or Clarke-ship, and penning of the Suruey with the Rectifying of Euidences and Records.

The seuerall functions of these partes are diffused thorough the whole Processe ensuing.

And so much for the Actiue part.

CHAP. II.

Passiue. The Passiue part of Suruey, hath reference to Possessions, as they consist of parts Essentiall and Accidental.

Essentiall. The Essentiall partes comprehend the matter and forme coincident to Possessions.

Matter. The Matter comprises the Elementarie composition and constitution of Possessions: and in discourse thereof, the Materiall parte is most conuersant.

The Matter is either Naturall, whose state hath admitted of no substantiall alteration, other then the hand

of

of Nature hath impressed therein : or Artificiall , transformed and chaunged from the Nature and Originall Habite by humane industrie.

Naturall matter may bee diuided into Appropriate and Communicate. Naturall.

Appropriate is that which is peculiar and proper to some certaine person, place, or other particular limitation; and hath reference here to Earth and Water.

In the Earth the Qualitie and Composure thereof are to be considered. Earth.

In the first the Species and Habitude require to bee iudiciously obserued.

The Species of the Earth is either Vulgar or Pretious. Species.

The Vulgar is either Simple, as Clay, Moulde, Murre, Grauell, Sande : Or Commixt; as Creachie, Claunkie, Clayie, Sandie Earth. Vulgar.

Pretious Earth is that which consists of a middle Nature twixt Stones and Mettals; and all sorts thereof are friable and conuertible to Powder : Pretious.

And these are either Liquable or Not-Meltable. Liquable.

The first are Juices Concrete; as Salt, Alumne, Bitumen, Vitrioll.

Salt (Naturall) is found either in the Earth or Water. Of the first kind is Salt Armoniake, Sal-gem, Sal-niter, and Indian Salt. Salt.

The other sort is digged vp in Fountaines, Riuers, Washes, Salt-Pierres, Sea-shoares.

Alumne is either white or blacke, The first (and best) is either Liquid or Compact. Alumne.

Liquid Alumne is the soft, fat and limpid Koch (or Red) Alumne.

The Compact is ether Sugar like, or Shiuering.

The blacke is a kinde of Alumne wherewith gold is purged and purified.

Bitumen is either hard, as Asphaltus, Bitasphaltus, Bitumen.
Rosin;

Rosin; Or Liquid, as Saphra, Petroleum, Amber, Vitriol, Coppras.

Not-meltable.

The Pretious Earths, which are not Melttable, nor indurated into Stones nor Mettals, are Stibium, Azure, Auripigmentum or Arsenicke, Sandaracha, Calx, Plaster, Chaulke, Coale, Canole, Marble, Orker, Terra-sigillata, or Lemnia, Armenia, Germanica, &c. Luckers or Fullers Earth, Argilla or clay for Pots, Gallie and Thacke Tiles, Bricke, Water and Tabacco Pipes, Purflaine.

And thus much for the Species.

C H A P. III.

Habitude.

The Habitude of the Earth dependes vpon the Inherent disposition and temperature of the same in Heate, Colde, Moisture and Drienesse. For although in regarde of the Colde and Drie substance and Nature, whereof the Earth generally consists, it may be saide to be of one temperature; yet vpon occasion of the diuersitie of Situations, Affinitie, Intercourse and participation it hath with things of repugnant qualitie, it purchaseth and acquireth contrarie qualities.

And therefore it would be also peruestigated, whether it be light, loose, soft, fatt, oylie, slipperie, mouldring, cleauing, tough, stiffe, moorie, leane, barren, fertile, water-swallowed, soale bound, constipated, or what other due or vndue poize and proportion of temper predominates.

Composure.

The Composure of the Earth comprises the Base and vpper Crust of the same.

Base.

Pregnance.

The Base of the Earth offers due obseruation to peruestigate the Pregnance wherewith the Earth is imbolwelled, whether it bee Prime; as in the precedent

cedent Species; or Concrete, as in Quarries and Mines.

In the first discover, what Ragge, Freestone, Mil-
stone, Grind-stone, Syth-stone, Emeril-stones, San-
guinin-stones, Bones, Lutch, Teate, Slude, Slate:
What Marbles, as Alabasters, Ophites, Porphy-
ris, &c. Also what Gemmes, as harde Adamants,
viz. the Cenchros, Macedonick, Cypricke, Siderite:
the flammid Carbuncle, purple Amethyst, greene E-
meraule, and Opall Paderas, with their Trineued
luster: the vyolet Hyacinth, Skie-coloured Sapphire,
Lustrie Diamonde, shining Topaz, starrie Calche-
donie, sparkling Rubie, golden Chrysolite, splendid
Asterite, various Achate, horny Corneol, greene
Jasper, pellucid Onyx, cerule Targeis, candid Cry-
stall, harde Blood-stone, attracting Loade-stone, white
yellow and Falerne Agate.

Quarries.

For the second note, what Mettals or Minerals,
are therein generated: whether Pure as Golde, Sil-
uer; or impure as Leade, Tinne, Brasse, Iron, Steele,
Lattin, Copper, Coperas, Quicksiluer, Stibium,
Antimonie, Chrysocola or Bozas, Minium or Vermil-
on naturall, Sandaracha, Verdigreece, Salt, Allome,
Wimstone.

Mines.

Also Coale, Canole, Colours amongst the Minerall
Dare of Gold and Siluer, as Sil, Azure.

The vpper Crust is the Soile or Soale of the Earth
through which the irradiation of the Sun penetrating,
corroborates & cheeres by the flatiue heate with tempe-
rate calefaction, which together with the infusion of mo-
derate showers and moistures, soaked from soilings en-
lisens the radicall humour, and doth so foment and fer-
ment the whole Masse of the Mould, that Dame Vesta is
inuitd and extimulated to inuest her selfe in her richest
Roabes of painted brauerie, and to produce and power
forth her Copu-copia of selected plenties.

Crust.

The

Crassitude.

The Crassitude of the Soale, is diuersified in severall Plots, and particular Modulets, as from 3. foote, to 4. foote more or lesse, and is distinguishable from the Base by compacture, by qualitie, by colour, by extention of the roots and fibers of grasse, herbes, plants. And vpon this Crassitude of the Crust, together with the Qualitie and Habitude of the same, doth the production principally depend (although the estate of the Base (by reason of the imparture of the innate facultie) be not utterly excluded all importance of fertilitie) and offers due obseruation, what Trees, Plants, Shrubs, Graine, Grasse, Verbes, Weeds, Mosse, and other Vegetables are in each Plot voluntarily or plentifully produced.

Inuesture.

And hence dimaines the Inuesture of the earth, which giues consideration of the Growth & Repletion of productions, both Vegetant and Animall.

Growth

In Growth, the thriuing, verdure, fruitage, prematurance &c. of particular Vegetables are regardable; as the boaling, spreading, arming, timbring & tapering of trees, braunching and bearing of Plants, Bushing of Shrubs, prolation and seedage of roots and herbes, depth and colour of grasse, &c. For thereby (sans further search) the Species and Habitude of the ground, where in they grow, are ingeniously intimated.

Soils known
by their pro-
ductions.

For if they prosper and thriue in burgening, sappines, flowers, fruit and the like, according to their severall kinds, in extraordinarie good proportion, it implies that either the ground is very fertile in generall, or that they are implanted in Plots Sympathizing with their Natures.

As the high timbring Oake dilating mightie armes in large extent, denotates a rich and battle soile; where on the contrarie, the knurly, crooked and crabbed harde sparing starueling, bewraies his barren and hungrie bedde.

The large and loose grained timber of the red Oake
and

and frusshie Ash showes a light, moist, rich & deepe soile : the like doth the largenesse and waterishnesse of rootes and fruit.

But the firme and solid graine of the white Dake and tough Ash, signifies a more fast and close ground.

High grounds produce wood of a more beautifull-featherd and better graine, than the low, except in Apple trees and Beare trees.

Rest-harrowes growing rancke and rooting farre abroad, intimate a fat, fruitfull, and long lasting soile.

The lowe stubbed Heath, argues a barren grauellie cold ground, the rancke and high showes it to be a more warme and tillable ; and commonly the white flowered Heath hath better layer, than the purple.

Diuels-bit, Eye-bright and yarrow by plentie in repletion, and mean in proportion, point forth a Sandy earth, of moderate heat and moisture, and a sweet shallow and wel-swooded Crust: and thus are these herbes frequent in the Irish Soile.

Groundswell, Thistles, Nettles, and other weedes by their rankenesse shew a rich tilth.

Blackish, milking and unkinde herbes shew a leane hungrie and bitter, or sowre ground.

Burnt & scorched herbes, and harsh, reddish, blewish spirie and pie-grasse betwray a cold, unkind, rough, starued and baked, or soaked soile.

Base herbes, and rough sandy stone, denotate a leane greety sandie or grauelly ground, according to the Poet :

Nan Ieiuna quidem cliuosi glarea ruris.

Vix humiles apibus casias roremq; ministrat,

Et tophus scaber &c.

Juniper demonstrates a chalky, drie and meane seat.

The knagged Holle mattes and cloathes the barrenest Mountaines with horned shoots, but promises that the Minerals of Iron, Leade, Tinne and Coale, shall Counteruaile the infertilitie of Soile with the rich Ballast

lasse entwombling the intrals of his spacious Base.

And thus much for the obseruations to bee collected from the growth of Vegetables.

CHAP. IIIL.

Animalia.

The qualitie of the Soile is also not obscurely intimated by consideration of the breedage of the Animals therein produced: for it is commonly seene that Cattle, Fowle, Fish, and other living Creatures doe differ and varie in colour, Bone, proportion and other peculiar attributes according to their places of Breede.

The large limbed Beate, Horse and Sheepe betoken that they had their breeding in fat and rich soiles. But the small and sound Sheepe, cleane limbed Horse and Beast of meane bignesse betwzaies a harde Country and shallow Crust.

In Ireland, where the soile is not deeply rancke, but moderately fertile, both in tillage and forrage, their Cattle and all other living Creatures (Den & Greyhounds onely excepted) are of a meane and middle stature and proportion, suitable to the soilage.

Yet the Shape of Cotswolde (*quamuis situs sit & collinus & gracilis*) are of great bone, large Becks and square Bulkes.

But according to the Nature of the Countries, diuers Animals are famoused for peculiar parts: so Virgil saith.

Virosaq; Pontus

Castorea, Eliadum palmas Epeiros equarum;

Continuo has leges æternaq; fœdera certis

Imposuit Natura locis &c.

So wee haue the Ripon Colt, Northerne Wilder, Scotch & Welch Pags, Irish Hobbie, Spanish Jennet.

The

The English and Friezeland Stædes, Barbarian-Courfers, Cappadocian Hunters.

The Sicilian Horse is praised for swiftnesse as are also the bræde of Libia and Siculia, the Georgian for valour and courage, the Dutch Mare is in request for the Caroach, and Thessalonian Mares for battell.

The Parthian Horse is famed for nimblenesse and dexteritie in running: The Median is exceeding faire and great: the Sardinian faire and nimble: the Pissan is goodly, shapic, easie and submissive.

The Marsh and Holland Dre is preferred for draught, the Lancashire and Darbyshire for tallow, hide and horne, and these are short-legged, of square bulke and black haire, the other are tall, and (for the most part) partly coloured.

The Bethol Rabbet is famed for fatnesse and fleshynesse: the Cotswould weather for large body, deepe, fine, white, and soft fleece: Norfolk Mutton for sweetnesse, but Lemster Dre merits the preheminance (though it be short) for a purely-fine, soft and crisped Staple.

The Coates of Angori are hung with shag ground-deepe, but those of Morroco haue their haire of ordinary length and refined smallnes.

English Mastiffes, Gase Hounds (or Lurchers) and Tüblers, are in special request: so Westphalian Bacon.

Russia breeds white Beares and blacke Foxes, and Island white Partridges, Pheasants, Faulcons, and Hares. Pegu carries the Palme for Parrets, Muske-Cats, and Ceiland (nigh Calicut) for Elephants.

^a For bignes, strength, and fiercenesse.

The Wandall Trout is held in high esteeme, and wee approue Wytham and Ancam, this for Celes, and that for Pikes, English Pikes, and Dykers.

So the Barbarie and Pembrokeshire Faulcons, and Tercell-gentles, Island Jerfalcon and Jerkin, Irish Werline, Gose-hawke, and Cocke of the wood, English Hobbie, and Sparrow-hawkes.

And in regard of such diuersities coincident to many creatures, by reason of their Countreys of bræde, it is remarkeable to obserue the seuerall particulars peculiar vnto them: as in Horses their stature, courage, cleanness of limbes, soundnesse and seruiceablenesse; in sheep their bulke, depth and puritie of Staple; in Beate their bone, hide, and haire, in Rabbits their furre and fatnesse: and the like of other things according to their kind.

And thus much of earth appropriate.

C H A P. V.

Waters.

Comorant.
Stagnant.

Fluent.
Current.
Influent.

Floating.

Water Appropriate is either Commorant, viz. confined within the plot. Or Current, not terminated within the limits thereof.

The first is either Stagnant, as standing Poles, Ponds, Lakes, Loughes, Mæres: Or Stillant, viz. Springing or bursting forth of the bowels of the earth, as Wells, Fountaines, Bathe, &c.

The second is either Fluent, as Rils, Brookes, Ri- uers, springing, and appearing with their first source within the bounds of the Plot: Or Influent, viz. dimay- ning from elsewhere, and flowing or passing by or through the precincts and confines of the Plot. And to this place may also bee referred all swæping or floating Waters, which flit and flæte to and fro with wind- catches, such as bee the Waters falling & descending from Uplandish countreys by land floods surrounding Fens, and other Flats.

And both these sorts of Current Waters, though they passe thorow, and beyond both the plot and Priuiledge of the same, yet so farre forth as they may be prescribed and intituled to the bounds or liberties thereof, they are thereunto appropriate. So much for Matter Appropriate: Communicate followes.

CAP.

C H A P. VI.

Communicate Matter is that which is participable to the Plot together with other Places, and may bee referred to Water Transient and to the Climate.

Matter communicate.

Waters Transient are Riuer, Brookes, Flouds (whence so euer dimayning) which passing beyond the extention and priuiledge of the Plot are communicably imparted to it, and to some other.

Waters Transient.

The Climate may also not improperly bee admitted as Communicate, in regard it may be said to bee the same (and in some sort not immateriall, by reason of the inseperabilitie thereof) sans manifest change, in a greater circuit then the limits of one Lordship, or an ordinarie Plot, doe vsually extend vnto, yet in the Suruey of whole Continents and vast Countries the Climate is not excluded from Appropriates: But howsoeuer you distinguish, it is not impertinent particularly to be penned downe, viz: in what degree of longitude and latitude the Plot is situate, and also in what Ayre, as Pellucid, milde, subtill, cleare, sweet, persant, some hot and colde, healthfull: Or grosse, close, foggie, sharpe, fenny, vaporous, vnhollesome: in what proportion of heat, colde, moisture, drinesse: what windes, stormes, gusts, are most remarkeable: what ordinarie effects and accidents, are vsually obserued to ensue, and succede vpon immoderate fairs of wet, or long continuance of drowth: And what Diseases as Catarrhes, Feuers, Fluxes, &c. are most frequent and common. And the like for Cattell.

Climate.

Latitude.

Aire.

And besides these and the former obseruations & distinctions, there is a peculiar intimation to be made of the nature and goodnesse of Waters.

Nature of Waters.

Clay waters are sweet, thick, fat, and potable, requiring the least proportion of Salt for Breuwing.

Waters which haue a stony and gristie Current, doe by straying thorough the same become cooler, pure, sweet, wholesome, and light of digestion.

Springs dimayning from thicke sand, and slender grauell, quickly gather mudde, and they are not durable, pibbles and grosse grauell afford good and pleasant waters, were they of continuance.

The Darle grauell, stonie sand, and redde stones produce best Waters.

The red stones with Plinie carry chiefe preheminence for euerlasting Springs, and water, coole and simply the best.

But the particular notifying of the Natures of ordinarie Waters, may bee with facilitie effected by the exact knowledge of the peculiar attributes, and properties of good Water.

Cognifance
of good
Water.

The best Waters are those that deriue their Sources, and Originals from Rockes, or stonie Fountaines irradiated with the Orient-Sunne, sliding in channels of hard and compact grauell or sand, repleat with redde stones, or blacke and burnt carbuncle stones, of limpid cleerenesse, light in poise and digestion, quicke in conversion of heat and coldnesse, cooler in Summer then in Winter, sans taste, smell, and colour, yet readily taking tinctures and qualities infused, leauing no discoloured spots by standing simple in a cleane vessell, nor excrements by decoction, by imparting heat and pure complexions, sound breasts, and cleere voices to the native Inhabitants.

Aque Calide.
de.

Besides these ordinary waters, there be Aquæ Calidæ, other waters indued with medicinable qualities acquired by vertue of some Minerall, from whence they distill: as Bathes, Wells, Fountaines, springing from Mines of Pitre, Sulphure, Allome, Bitumen, &c.

There

There be also Waters both vpon the Coast and with-
in the land (as at the Hamptwich, &c.) of so brackish a
Brynage, that they wil be conuerted to Salt by boyling. Brynage.

Other waters tho they be not conuertable in appro-
ued measure and goodnes to Salt, yet they haue vertue
to augment and refine salt which is boyled in them: so
the Zelanders boyle Spanish salt in Sea-water, to the
increase of 45. in the hundred, that of Portingale 35,
and that of Brynage 25.

Some Fountaines creame with a liquid Bitumen,
like to the lake Asphaltus, as at Pitchford in the Coun-
tie of Salop.

Now for Repletion, it intimates howe and where Repletion.
with the Plot is fraught, stored and replenished both
with V egetants, and Animals: viz.

For Woods, how peruiable, how penetrable, how en-
terlaced, as Timber with Tinsell, Coppice, or vnder-
wood: what Trees, Plants, Shrubs: what Fruitage,
Pastage, Gummage: what Hawlkes, Fowle, Uenery,
&c. are therein found and produced.

For Pasture, and Meadow; how and with what
Verbage the Crust or Sward is matted, mantled and
swarthed: what decrement by Masse, Mades, Water,
Stones, &c.

So in Waters, the kinds, goodnesse, and store of fish,
and Fowle, both peculiar and common, would bee re-
corded.

And thus much may suffice for the Naturall Matter;
It followeth to entreat of the Artificiall.

C A P. VII.

The matter may also be said to be Artificiall, in re-
spect of labour and industrie conferred vpon or a-
bout the Subiect and Adiunct of the Plot. Matter Arti-
ficiall.

These incidents to the Subject are comprehended vnder Tillage, and ground Plots.

Tillage,

Tillage generally taken may comprehend all manner of husbandings of grounds, but it is heere limited to Vertilage and Fertilage.

Vertilage,
Deluage,

Vertilage consists in Deluage and Fictilage.

Deluage is applyed about preparing, and putrifying of the Earth by stirring, tossing and turning of the same, according to the Poet.

Et cui putre solum, namq; hoc imitatur arando : viz. Vt arando solum fit putre : Neq; enim (inquit Columella) aliud est colere quam soluere & fermentare terram.

And this Deluage is distinguishable into Caruage and Scaphage.

Caruage.

Caruage comprehends all sorts of plowing of Grounds, as well ordinarie, viz. for Graine, Hempe, Line, &c. As Extraordinarie, viz. for Woods, Woode, Dyers-wæde, Rapes, Cole, Saffron, Mill, Millet, Panick, Amilcorne, Spelt-corn, Carences, Delwegrasse, Jobs-teares, Comin-seede, Annise-seede, Worme-seede, Cotton-seede, Canarie-seede, &c.

Scaphiage.

Scaphage is the digging, deluing, and preparing of the Soile with Spades or other handie-tooles for the sowing, setting, planting, and propagating of Seedes, Hearbs, Plants, Trees, &c. and is most conuersant in Gardens, Hort-yards, Hop-yards, Vine-yards.

And here it is expedient to animaduert what choice, selected, and endenized Hearbes, Plants, Fruits and Phisicall Simples be implanted & bestowed, with their Growth, Repletion, Fruitage, Fecunditie, with Contriuage both of Plots and Plants.

Fictilage.

Fictilage is the forming & transforming of Matter in form or substance; as in making of Tile (for thack, roffe, cress, gutter, paving) Brick, Pots, Tabaccopipes, Tonel or Conduit pipes, Glasse, Purllane, and other Plasmature: If therefore the Plot doe afford any Earth or Clay,

Clay, which may be accommodated to such purposes, it behoues to record the same.

CHAP. VIII.

Fertilage consists in the enriching of the Soyle, and Fertilage.
the Rectifying of the Production. And in pursuite of this practise, diligent consideration must be had of the variation of the Plot, from the due Habitude of a rich and battle ground; to the like and equall condition, whereof, it must be endeouored by appropriate meanes to reduce the same, or at least to correct and qualifie the vndue Habitude in the eminentest exorbitance.

And it shall not bee amisse to particularize the Natures and qualities both of good and badde soyles, to the end their distinctions may be facilized.

The Nature and goodnesse of ground is diuers waies be-tout and manifested; as by the mixture, temperature, The Nature colour, compacture, touch, weight, taste, smell, &c. of grounds together with the voluntarie Production and Repletion how known. of the Plot.

Such a diffused mixture of Clay and Sande, moy^r Mixture, sture and dryeth, heat and cold as confounds their distinctions of deriuing appellation, from the eminent predominance of any particular qualitie inherent in the soyle, carries a generall approuement of goodnesse.

Virgill infers the best layer for Tillage to be an Earth Blacke, which is blackish and darke, not too compact, of a deepe crust, viz. sat vnder the share, though it goe a deepe pitch, well putrified and resolved, &c.

*Nigra fere & pressio pinguis sub vomere terra
Optima frumentis &c.*

And Mancinellus saith, it must bee neither moy^r nor drie, waring black after the plow, easie to be tilled, and where Woks runne sluttering after the share at the be-
rie

rie heeles of the holder, and that not of ranke, but moderate fruitfulnessse, with which the deprecation of the Poet, doth not vnfitly concurre, where he shewes that moist layers, are knowne by ranke and abundant grasse.

*Humida maiores herbas alit, ipsaq; iusto
Lætior: ah nimium ne sit mihi fertilis illa,
Neu se praua lidam primis ostentat aristis.*

Red.

But notwithstanding the preheminance given to the blacke and darke colour, some are induced to preferre the red layer, and so much the rather for that Adam (who was immediatly created of Earth) importeth Earth of a redde or ruddy colour: And experience also giues instance of diuers such soyles (though not so frequent to confirme euerie man in the same opinion) of wondrous worth and fertilitie, amongst which the Territories of the Towne of Armagh in Ireland, are famous for lasting and perpetuall battlenes, as hauing time out of minde, as appeares partly by their vasse dung-hills, peeling both yards and streets, without any kinde of manuring, yelded plentifull increase of grasse and graine, howsoeuer the Natiues attribute this continuing richness of the soyle to the speciall benediction of their Sainted Patron Saint Patrick.

Compacture
found by the
stowage.

Some let not to conclude in commendation of the Soile vpon the bare experiment laid downe by Virgil for distinguishing betwene open and rare soyles, and such as are condense & close, where he wils to sinke a pit in some solid place, and to take out, and breake the earth, and after to tread it in againe, and if it swell aboue the former height, they iudge it rich according to the proportion of the supereminence, if it proue euen and flat, they esteeme it meane, if it settle vnder, unertile. But the Poet commendeth that which is rare, and not condense, for producing of grasse and plants fit for brouage, and broulage of sheepe, and for Vines; and that which by filling

filling the Fosse appeares to bee compact and dense, hee intimates to yeeld large and tough furrowes, and desti- nates it to Tillage.

Rara sit, an supra morem sit densa requiras,
Altera frumentis quoniam fauet, altera Baccho,
Densa magis Cereri, rarissima quæq; Lyæo;
Antè locum capies oculis, alteq; iubebis
In solido puteum demitti, omnemq; repones
Rursus humū, & pedibus summas æquabis arenas:
Si deerunt, rarum; pecoriq; & vitibus almis
Aptius vber erit: sin in sua posse negabunt
Ire loca, & serobibus superabit terra repletis
Spissus ager; glebas cunctanteis crassaq; terga
Expecta, & validis terram proscinde Iuuenis.

And the fat soyle he saith, dissolues not, being laboured Moulding.
in the hands, but becomes clammy, coheres, & cleaues
to the fingers: and that Earth that by moulding in the
hand doth clift and cleaue, and resolue into powder, or
moulde, argues a barren, and leane layer.

Pinguis item quæ sit tellus, hoc deniq; pacto
Discimus; haud vnquam manibus iactata fatiscit,
Sed picis in morem ad digitos lentescit habendo.

The poize and colour (saith the Poet) are euident, Weight.
but the scorched and noysome chilnesse of the soyle is be-
wrayed by the voluntarie growth of Pitch-trees, Ewes
and blacke Zue:

— At sceleratum exquirere frigus
Difficile est; piceæ tantum taxiq; nocentes
Interdum, aut hederæ pandunt vestigia nigræ.

For deprehending and finding out the taste of the Taste.
Earth, Virgil prescribes a generall Specimen in his con-
clusion for triall of salt and bitter soyles; viz. to fill
close wicker baskets with the earth and water, and
then to runne and straine through the water by treading
or pressing, and so by the taste of the water to iudge of
the Earth by the qualitie imparted:

tu spisso vimine quallos
 Colaq; prælorum fumosis diripe tectis;
 Huc ager ille malus dulcesq; a fontibus vnda
 Ad plenum calcentur, aqua eluctabitur omnis
 Scilicet, & grandes ibunt per vimina guttæ,
 At sapor indicium faciet manifestus, & ora
 Tristia tentantùm sensu torquebit amaror.

Fonticke Worme wood bewzaies a bitter and barren soyle, according to Ouid:

Turpia deformes gignunt absinthia campi,
 Terraque de fructu, quam sit amara docet.

Smell.

If somewhat before Sunne-set in the first rain-fall ensuing a drought, or in earing, the Earth shall breath forth an aromaticall odour and sweet saour, it is held an infallible signe of a temperate fertilitie: And that ground which exhales and breathes-forth erile and summie vapours quickly vanishing, which attracts humors and selfely expels them, which inuests and cloathes it self with a close sword of fresh græne grasse is parabile, gentle, and plyant for the plowe, good for graine, Climes, Vine-yards, and Oliuets.

Quæ tenuem exhalat nebulam, fumosque volucreis,
 Et bibit humorem, & cum vult ex se ipsa remittit,
 Quæque suo viridi semper se gramine vestit,
 Nec scabie & salsa &c.

Pulla & Cariosa.

Cato in two significant Epithites (sed per transfennam) comprehends the seuerall attributes, both of a good and bad soyle, viz: Pulla and Cariosa.

Plinie disentraueres the meaning of Pulla to imply a blackish, gentle, mellow, and tender soyle, and such a one (saith he) is determined to be best, both for Tillage, and worke, because by Tenera is intended a soft and plyable earth.

Production.

And amongst other signes of a good soyle, hæe enumerates Wall wort, Skeg træs, Brambles, the little wilde bulbous Crow-toes, (called our Ladies Cow-slip)

flie) Clauer gras, Trefoile, Melilot, Dakes, Wilde Peare trees, and Wildings, to betoken a temper appropriate for Wheate and White-Corne. And this is the more probable, if they be plentiful in number, and ranke in growth. And both he and Virgil, commend the soyle to bee singular good for Corne, where woods haue been lately stocked by:

Aut vnde iratus siluam deuexit arator,

Et nemora euertit multos ignaua per annos:

The qualities of a badde soyle are implied in the Barren Epithite Cariosa, which Plinie explaines to import a layer. Wood-like rottenesse, viz: drie, spongeous, full of holes, rugged, hoarie, olde, and hollowe.

And Virgil affirms, that the barren ground wareth pallid and whitish after the plowing:

At rudis enituit impulso vomere campus.

To these may be added salt, bitter, chauning, burnt, parched, soale-bound, choaked, colde, and wet spelwing grounds.

To conclude: Out of the premisses it may be collected, that the best soyle in generall, consists in a well-seasoned mixture of a blackish mould which is light, deepe, fat, sweet in taste and odour, murling, plyable, mellow, of moderate warmth, not stowable in the primer continent, shining blacke after the share, dulcique vligine lata, and rich in radicall humour.

Characters
of rich
soyles.

So much for the knowledge of ground.

C H A P. IX.

The Nature and qualitie of Grounds thus layde downe, and the present state and Habitude duely Enriching. considered, the meanes besitting for the Enriching of the Soyle will be more euident.

The enriching of Grounds doth consist in Clearing and Chearing.

The clearing of the Ground is conuersant in disburthening the Soile from incumbrances and annoyances, as Water, Stones, Weedes, &c.

Surroundings.

Surrounded grounds may be won by Sewing them with competent Draines, Tunnels, Goats, Sluces, and such like, if the Water-fall be sufficient; otherwise some Enginarie aide must bee assistant to mount the water by Screwes, Pullies, Poizes, by causing Vacuums, or reinforcing of Spirits into narrow straights and Cylinders.

And to retriue the difference twixt the line of Leuel, and the Circular or Water-leuel; to the Earths Semidiameter (viz: $3436 \frac{4}{11}$ Italian Miles) squared, add the square of the distance propounded, from the square roote of their Totall take $3436 \frac{4}{11}$: the Remainder is the difference.

Bogges.

Spungy and boggy grounds must be intertraced (corresponding to the Current or Discent) with Trenches of some eightene inches breadth both at toppe and bottom, and where the toughnesse of the swarth or turffe wil permit some spare spaces, may be vnder mined; but to preserve all the swarth, you may couch good coggles, al-alongst the Trenches a competent height, and the soddes vpon them, so the water will soake and draine thorow: And this practise is most aprouable and peculiar in mildzing Clay, which otherwise by shooting and melting downe into open Trenches, would choake vp the water passages.

Stones.

For Coggles, Flint, Pebbles, Shingles, and other Stones hindring the earing, and oppressing the graine or grasse, the conceit (in Aiar) of setting hable Vagrants to earne their Almes, is not vnworthie imitation, whether to the Lime-kill, house, high way, ponde, fowd, or other vse.

For

For Vegetable impediments, as *Bushes, Shrubs, Briers, Furres, Whynnes, Brome, &c.* they being *Bushes. Broomie.* once rooted vp by dogging or grubbing, the Plot must be well pyled with the Plow, and sown some Crops successively after: to which earing if well soyling with good Marle, and Stall-dung be added, they will bee vtterly extinguished, though they be rooted in a barren, hot and drie soile, their proper element; but the cause being remooued (vt supra) the effects of producing these bad burthens must needs surcease by consequence.

The infusion of Lupine flowers in Hemlocke iuyce caste vpon Shrubbe roots, is said to kill them; but this is too curious.

Linge, Heath or Wather, in salt, sandie, drie and barren soyles will die and decay, if the distemper inherent be reformed by manurings with fatte marle, rich and rotten moulde, &c. *Heath.*

If they grow in grauelly colde Earth, they require Stable dung, but in grauelly colde Clay drenched with blacke water, Lime and Chalke worke best effects, by soaking vp the superfluous Water, killing the Heath and comforting the Earth.

Brakes Brakin or Ferne, though it cannot be cured *Ferne.* with abulsion, by reason of the ranke power of regenerating or increase, retained in euerie particle of their roots, which are so recurued as they are not possible to be plucked vp without some Remainers: Yet being cut downe in their infancie, and cast vpon their owne roots, they will suffocate and destroy themselves, especially if they be therewithall Sharpe-folded and ground fedde with ruminant Cattell.

Flags, Sedge, Rushes, and other weeds abounding *Flags.* in boggie and spungie grounds, doe wither and waste away, by the superfluous moisture which breeds and feeds them, being draloue forth by draynage; but if the Plot be pestered with Alders, you labour in vaine to euacuate

ate the wet before the Trees or Bushes bee eradicated, for their roots do naturally attract so much moisture for their nutriment, that all the ground adjacent will be eftsomes choaked with a continuall cold wet.

Thistles.

But the former weeds with Thistles, Hemlocks, and all sappie weeds cut downe in Wood seare, and often mowne againe whilst they are tender, their roots will putrisie and rotte ouer-burthened with affluent iuyce wanting due and wonted passage for growth: and the Thistle stalke, must not be permitted to rest greene nere to the earth, for by the euaporation thereof, it wil adderlike reuine and roote againe.

Burres

Rich Grounds pestered with Burs, Hemlocks, Petfles, & ranke weeds are commodiously disburthened by sowing them with Hempe, Line, Mustard-seede, &c.

Rushes.

Rushes, ranke sower grasse, Prie and Quitch-grasse, Mosse, Weedes, &c. In waterie colde Clay, are destroyed with Harle, Lime, Chalke, Uraic, Sote, Cole-dust, Soape and other Ashes, Shauings of Horne, Burning of Beate.

Mosse.

Mosse generally is destroyed with Doves and Hens dung, and it putrifies being turned-in with the Plow: But Bushes, and Shrubs, must bee also remoued, for by their oft-droppings of wette retained after showers, mists and deawes, the swarth or turffe is so infrigidated and chilled, that being continued for or conuerted to meadowe, or grazing, it eftsomes reassumes his mosse habite, though the Plot bee not naturally prone and inclining thereto.

But a scurffie hungry Mosse and small Lung-wort, dispersed ouer an hot, drie, and heartlesse ground, is best destroyed with a limie, and oylie Harle.

Ant-Hils.

Where Mosse, Ant-hils, and Mole-hils doe abound, it is excellent husbandrie to eare it, and sowe certaine Crops of Dates, for they prepare all lay-grounds, especially if they be sower and soaked with wet.

And

And for Ant-hils I haue obserued a rich increase of Oats (in an indifferent soyle) sowne in the very mould of the hils (being many and great) cast abroad and well harrowed without plowing by the plain turffe, the summer season proving not too drie.

The quartering of the sword of Ant-hils, casting their ballast, & playning their Plots for pasture, are so frequent & approued, as there needs no demonstration.

Wilde Dates pestering and pilling of Tilthes, are best destroyed by Summer fallowings.

And so much for Clearing of Grounds.

Oates.

C H A P. X.

The Chearing of Grounds consists in the curing of their infirmities, inherent naturally or by acquisition, and in the refection, and refreshing their weak and languishing vertues.

Chearing.

Clayes and all grounds distempered with colde and moisture, are cured and cherished with stable-dung, Doves dung, folding, burning, lime, soote, iron finders of the furnace beat small and sowne thinne, and with Coale, Ferne, and Soape-Ashes.

Cold and moist.

Barren hot sandy-soyles, and hot drie Earth producing parched grasse and dwarffie Masse, doe craue staldung, street-soyle, pond-mudde, rich mould, fat marle, Salme or River-slabbe, scowrings of hedge-rowd Ditches, lime or moorish earth or Purgeon to helpe all defects.

Hot and drie.

And Virgil saith, ———— Arida tantum

Ne saturare fino pingui pudeat sola:

For is the sheepe-folding and foddering, and the Compost of putrified Henbane, Hemlockes, leaues of Apple-trees, willowes, &c. of lesse efficacy.

Brittle and sickle Mould of meane temperature
twixt

Brittle
Mould.
Spewing.

twixt hot and cold, is best soyled with well rotted horse dung.

Spewing grounds ouer-soaked with sower moisture are well releued by being sowne with Dates, for by their arising and drying qualitie they sucke out and consume that noysome humour.

Boggie.

Boggie and spungie grounds are not a little settled, fastened and firmed by frequent ouer-flowing them with

A Paradox.
Stiffe-Clay.

Fords or Land flouds, affording a fatte and slimie substance or stubbe.

The stiffe colde Clay craues Ashes, especially of roots stocked vp, Chaulke, Sea sand, Salt dust sowne thinne on the tilth, lime incorporated with Stable-dung, salt.

Soal-bound.

Crust-clung and Soale-bound soyles craue Caruage for prest and peculiar Gaole deliuerie, this lightens and loofeth the soyle, and enlargeth and prepares way to the operation of the radicall humour, and consequently serues in lieu of Compost.

Chapping.

Chapping grounds, chinking, or chauming with Cranies are cured, and stiffe-cold spuing grounds, are admirably relieued and fertilized, by burning the stubble, fogge, or turffe; whether that by closing vp the Chinks, it auerts the extremities of wet, winde, frost, and Sunne, whereby the sæde might be suffocated, blasted, starued or parched, or the soyle distempered; Or that it exhales and purges forth, and euaporates al hurtfull and pernicious humours; Or that it pinguifies the soyle, and imparts to the sæde some secret nutritiue power; Or that by stirring vp the native heat of the Earth, it reuiues the radical and bliginous humour, and by opening and enlarging the obstructed passages, and baines, giues entrance to the airie spirit, and iuyce that quickens the graine:

Sæpe etiam sterileis incendere profuit agros,
Atq; leuem stipulam crepitantibus vrere flammis:
Sive inde occultas vires, & pabula terræ

Pinguis

Pingua concipiunt; siue illis omne per ignem
 Excoquitur vitium, atque exudat inutilis humor;
 Seu plureis calor ille vias, et cæca relaxat
 Spiraamenta, nouas veniet qua succus in herbas:
 Seu durat magis, & venas adstringit hianteis,
 Ne tenues pluuiæ, rapidiue potentia Solis
 Acrior, aut Boreæ penetrabile frigus adurat.

But generally all grounds, be they neuer so barren,
 are much bettered by burning the dried heapes of the
 turffe or swarth delued, howed, pared, or plowed by and
 dried, and after spread all ouer the excoiated Tilt,
 whether it worke as aforesaid, or that according to Pli-
 nie, it burnes by and destroies the Seminarie of grasse
 and weedes, which would robbe and depriue the soyle of
 the rich Juices and vertues which should fede the
 graine.

And the excellent effects deriued from this Beat-bur-
 ning, haue brought the same into such approueable re-
 quest in Devonshire, that of the frequent vse and fruit-
 full practise thereof in those partes, the name of Den-
 shiring deduceth the originall.

Den-shiring.

Summer-eating doth greatly enhearten weake
 dolwes, and restore their decaying heat and vigour im-
 peached by yeerely mowing.

Meddowe

In the North of Ireland, they do with much conueni-
 ence, by kreating & shifting their Woolies frō sed-fur til
 haruest be inned, both depasture & soile their grounds,
 and preserve their graine from destruction by their cat-
 tell, and them from the Wolfe and Wood-kerne.

Kreatings.

And the sowing of the seede of Trefoyle, or Clauers,
 Melilot, Prunel, Milfoyle, Ribwort, Septfoile, Cinque-
 foyle, &c. mixed with Murling Mould, doth much enrich
 Meddowes and Pastures both in Forrage and Senage.

Sowing of
 Seedes.

Sea sand diffused amongst infertile Tilties, infa-
 ses animall power of such efficacie, that it produces
 Crops equiualent to burthens of very battle Clebes.

Sea-sand.

C

And

And Rest to a meane layer, serues no lesse in lieu of Compost:

Nec nulla in terra est inarata gratia terræ:

Also,

Alternis item tonsas cessare noualeis

Ashes.

Et seque[m] patiere situ durescere campum.

And all Emacerated Soyles are much amended with fatte Ashes: ————— Neue

Effetos cinerem immundum iactare per agros.

And there is so much attributed to Rest and Ashes for enriching of soyles, that they are numbred amongst the three things seruing to increase production of Crops:

Lætas faciunt segetes sterco[r]atio, intermissio & cinerum sparsio.

Of diuers Ashes we haue before (and shal hereafter) vpon speciall occasions, made mention for their approued efficacie in seuerall distempers. And Plinie reports that Ashes are in such request, for soylings nere vnto Do, that they burne their Horse-dung to make them; but we are too wise, holding it ridiculous to innouate, nay to imitate any thing not approued by continual practise, howsoeuer we haue authenticke records from antiquities to animate vs thereunto.

Rich Soyles.

We willingly wish the fruition of soiles parallell to the Territories of Bizacium in Affricke, which is so plyable to the Plow, that after a good ground shovre, a sorry Ass and a silly old Trot, may roundly trot away with the Team, and so plentiful in production, that it yeldes increase one hundred and fifty folde, but we would grudge at the stubboynesse of the ground in a dry season, when we found it scarce tillable with a strong Team of Dren.

Or we could plausibly approue the light & easie Tillage, and rich Graynage, by Winterton in Norfolk: the Austrian soyle tilled with a single horse; the fruitfull Plaines of Podolia where they sow but euery other yere

peare (the shaked corne seruing (like Rapes) for the second seedage) the Hungarian treble haruest, the fertile Meddowes of Komora (fled with Danubius) which produces grasse man-high, yet farre short of the Meade vnder a Bourne nere to Salisbury, where the production extendes to sixtene fote.

The Meades of Interamna, yielding yearly foure Mathes of Hay, &c. but we would not with like alacrity imitate the industrious paines of the ingenious Chymists, who by their diligent and intentiue husbanding their fertile fieldes, support their strangely populous Territories in farre greater wealth and plenty, then can be deriued from their trebled fruitage and affluent vintage, without their own extraordinary industry and diligence.

In rich soyles we are slacke and sapine, neuer practising any new or inbulgar intention (how probable soeuer) to helpe Nature and fertilize our fieldes, but we plod on in the common Road of habituated husbandry, and so oftentimes come short of that proportion which good husbands reape in a farre meancr layer.

In barren and harde Countries, wee are force perforce vrged to some industry more then ordinary: As in the Countries of Salop, Denbigh, Flint, &c. they fetch Lime Stone foure or fve miles, to burne for batteling, and Sea sand six miles to scatter on their Tilties, in Cornewall, Deuon, Somerset, &c. And in some partes of Hartfordshire (not to defraude the industrious of any praise due to diligent deboires) they fetch Mault dust further, and shauing of Horne aboue twenty miles, to strow vpon their Arable (though it be a good soyle of it selfe) to kill the weeds, and cheare the soyle, and therby doe much increase their Crops.

In Denbighshire, and else where, they plow vp the Crust of barren soyles in thinne Turffes, with a broad winged share, then dry it in round heapes, and about

1. Lime.

Mault-dust.
Horne-shavings.

Burning of
Beate

September, burne in and disperse the Ashes all ouer the bared and Excoriated groundes, and thereby refresh their faint and hungry sterility, to an incredible production of Dates.

2. Lime.

In Flintshire, they soile their sandy layers (both blacke and red) being seckie, tough and wet, with lime made of a dunny gray stone, helued forth of the Rockes and broken with yron malls (though the smooth hard beach on the Sea-shoares burnes to a purer white) and after burning, lay it thicke vpon the layer, leauing it to be sleeked with the next showre, by which being dissolved and then intermedled by the plow with the soyle, it puffie lights and party colours the same, and produces diuers rich Crops; The vse thereof is also well approved for their Clates in thinner quantitie: but they teach their perring wild sand with stall dung.

Sleeked
Lime.

About Workenslope in Nottinghamshire, their best Compost is sleeked Lime (six quarters to an Acre) sowe vpon the Tith, for two Crops, for Winter come in Sommer, the other contrary, and this giues good increase, not so much through the imparture of any fastening facultie, as by fastening the wilde loose sand of their light, hotte, and red layers: And though the small show of winter verdure giues wann hope, yet his faire May flourish rebuiues the dropping spirits of the doubtful and wauering experimenter, with full assurance of a rich besture for harvest.

The quanti-
ty of Com-
post.

And generally for the quantify of dung, it is held best to Manure oft a little, for ouer dunging burnes away the heart of the soyle.

The better the soyles are, the lesse Compost they craue, but grounds not dunged grow cold and weak, howsoeuer some are so battle in fertilitie, that their rankenes cannot with continued tillage be sufficiently abated; as the Territories of Tacape mentioned by Plinie.

But,

But, to speake somewhat of the qualities of Com-
post, there are diuers kindes of dung, and sundry opi-
nions touching their goodnes and efficacie.

Marcus Varro attributes the chiefe esteeme to the
dung found in the Bartons of melwed Blacke-birdes,
both for tillage and forrage.

Pullen and Landfowle are commended for their
dung, but all water fowle reiected.

Columella commends Pidgeons dung, and with vs
it carries chiefe preheminance for due prizall of worth.

Many giue the first place to mans excrements (the
Ballast of Ajax) but the excessive heate therof would be
qualified and abated with the swappings, parings, and
filth of house floares.

Some preferre mens Urine, when hide-haire hath
bene soaked therein, with Lime in a Tanne-fat, others
commend the Urine mixt with water.

Diuers affirme the Asses dung to bee best, most pre-
pared, and presently fit for the earth (whereas other
dungs require time to putrisie) but Plinie is contradic-
tory.

But for generall approuement, the Treddles of
Sheepe and Goates may passe for current.

Next followes the dung of Peate, then of Horses and
Mules.

The Nature of Swine is current with some for good
Compost, but it seemes by Columella, that it best fits the
Asses pasture, whose forrage is Burres, and worse bag-
gage, but doubtlesse the immoderate heat therof burnes
by the radicall humour of the soyle.

For Lime I haue spoken sufficiently before of the
Moderne vse thereof, nor was it in lesse request amongst
the Hedvans and Pictones for fertilizing their fields.

Cato prescribes an Artificiall Compost of Litter,
Lupines, Chasse, Beane stalkes, Leaues and Branches
of Mast holme, and Dakes laide to putrisie.

The quality.

Birdes.

Poultry.

Doves.

Ajax.

Asses.

Sheepe.

Neate and
Horses.
Swine.

Lime

Compost.
Artificiall.

Optimum
Stercus.
Vegetables.

But as *Oculus Domini* saginat equum, so dayly experience approues *Domini Vestigia* to be *Stercus optimum*.

Dane-wort, Hemlocks, dead-leaues, ranc-k-wædes, Ferne mowne in August, Sea-wædes &c. withered, cast on Tilthes and foulded with shepe, doe very much profit. And no lesse baying cast into the Cratch-yard all Winter, and bestowed on the fallowes next September and October.

Vraic.

And Vraic or Drewood, (*Alga Marina*) is diuersly applyed for soyling. In Ireland they rot it in great heapes, from Sommer to Sommer, and then cast it on their Tilthes for two or thre Crops.

In Anglesey, they plow it in without putrifying for two Crops in any soyle.

In the Ile of Gersey, they dry the wæde for fetwell, and with Ashes fertilize their fallowes no lesse then with Marle.

In Cornetwal they vse both Drewood, Sea-sand, and Sea-slubbe for soylings,

Sata.

The very fruites of the earth being sowne doe serue well for batling, as Buck-wheat or Brancke, Pease, Vetches, Beanes, Fasells, Madder.

Sic quoque mutatis requiescunt fatibus arua.

And *Columella* saith, *Medica agrum Stercorat.*

Lupines.

The sowing of Lupines is no lesse approued for bettering the Tilth, but especially if they be turned in with the Plowe, and so left to putrifie, about their flowering.

And because white corne is commonly a soaker of the soyle, the Poet counsels to sow it after Pulse and fatning graine.

Aut ibi flaua seres mutato sidere farra

Vnde prius latum siliqua quassante legumen,

Aut tenuis fetus vicia, tristisque lupini

Sustuleris fragiles calamos, Syluamque sonantem.

Saffron.

For is Saffron inferior to fatning graine, insomuch

as

as their bulbous rootes doe so enrich the ground, that after three yeeres continuing the same with Saffron, (as Master Camden affirmes) at the rate of eightie or one hundred poundes new (but twenty dyed) vpon an Acre, the soyle about Saffron Walden, produces great store of Barley, for some eightene yeeres without Compost, and then againe refuses not his former fruit. Pillers of the

But Wheate, Barley, Woade, Vetches, Fenigraeke and all Pulses, plucked vp by the rootes, are great impairers and soakers of the soyle: And Lin e, Poppy, and Dates doe burne and pill the Tilth. Solo virus Ciceris & Lini; the one with his salt, and the other with his hotte qualitie. Tremelius. The Poet.

Vrit enim lini campum seges, vrit auena,

Vrunt lethæo perfusa papauera somno.

And Theophrastus saith, that Dates by their drynesse and multiplicity of rootes, doe arise and extenuate all Soyles.

And in this place it shall not be impertinent, to make some mention of Marle, sith the good approuement both of the ancient and moderne vse thereof is such, as may iustly challenge to be had in no meane esteeme for manurings. Marle.

Plinie affirmes that there are but two kinds of Marle Two sortes in Nature, viz. either hard and churlish; or gentle and of Marle. fat, and these are tryed by the hand: and both for graine and grasse (though we say Marle kills both wades and grasse in arable) held in good request.

And the various sorts of Marles, found out by inuentiue wits, doe all of them fall vnder the two former kinds, whether they bee white, red, Columbine, stony, Sandie, Clay-soyle, &c. or what others.

The white Clay or Marle is fat, sharpe and mordant and yet the best. It is vsed for moist cold grounds in Magara, as our Chaulke with vs.

Leucargilla.

And the white Chaulkie Clay, vsed by Gold-smithes Tripela.

lies

lies deepe in Britaine, and lasteth for soyling eighty yeares.

Gliscomar-
gon.

The Fullers Chaulky Clay mixed with a viscous and fattish Earth, is another white Marle, and is better for graine then for grasse, yet, howsoeuer it suppresses weedes and grasse in coyne (as all Marles doe) the Tylthe, after haruest be inned, growes so growthsome that it yeeldes an after-math, for Crouen Hay.

This Marle continues the soyle in good plight thirty yeeres, but if it be laide on ouer thicke it choketh the ground.

Capnumar-
gos.

The light red Marle intermingled with some stony gritte full of Sand, fertilizeth both Tillage and Forrage for fifty yeeres.

In Anglesey they approue red Marle, and in some places white, to refresh and giue life to the spent and tired Glebes.

Pelias.

Columbine or Pidgeon Marle, lies in lumps and cloddes, but with Sunne and Frost, it resolues and cleaues into thinne flakes or flakes, and serues both for coyne and Hay.

The quanti-
ty.

In some parts of Ches-shire, they bestow forty loades of Doue-discoloured Marle vpon an Acre, and this being Frost-mellowed & spread abroad, dissolues and incorporates with the Glebe, and so fattens the Sandy and hungry Soyle, that it repaires the charge of thre or foure pound, with rich increase for twelue or sixtene yeeres. Insomuch, as to farme this wel-nigh worthlesse ground, they will Marle, Till, and Seede it for halfe the increase: And they let and set such Marled grounds, vnder twenty yeeres at an incredible rate of monies in hand.

Stony Marls.

Stony and Grauelly white Marle, found amongst Springs and Fountaines, causes infinite fruitfulness though it be rough, but if it be laid on too thicke, it parches the very ground.

And

And Sandy Marle serues (for want of other) chiefe- Sandie
ly in cold moist and weely grounds. Marle.

The dry Marle sortes with moist Soyles, and fatty
Marle hits the dry and leane.

For Soyles of middle temperature it skils not whe-
ther you vse the White Gold-Smithes Chaulke, or the
Columbine Marle.

But generally most Marles, (saith Plinie) craue to
follow the Plow, that their medicinable vertues and
substance may the sooner and more grædily be attracted
and receiued: and a medly of dung were not amisse, to
correct the ouer-rough hardnesse of maine Marles.

The Vbiens enrich most fertile grounds, with any
earth digged from threë foote depth, and lay it foote thick
for tenne yerres.

At Chatmosse in Lancashire, their bliginous and
soaked Mosses doe recompence t heir means ayre with
vinctious Turffes, Wood for woрке, fewel and Candel
and fat Marle to manure their Soyles.

And were we as iudicious in inuention, or industri-
ous in imitation of the diligent, as we are superstitious
in plodding in habituated & accustomed courses of hus-
bandry, we would endeavour (all idle pretenses abando-
ned) to make seuerall Soyles serue interchangeably, Intersoilings
each to other in true validity of Compost, by inter-soy-
ling or seasoning the one with the other.

As Grauell and Chaulke, Clay and Sand, So light
and sadde, tough and friable, hot and colde, battle
and barren, &c. ——— Yet Plinie saies it is a mære
folly and wast expence to lay fatte earth vpon leane and
hungry, or dry light and thirsty vpon ouer moist and
fatte.

But land-flouds, fatte Riuers and Gulfs of water Waterings.
participating of a slimie and muddy substance, induced
and brought into Meddowes and pastures in the spring
by draines, dams, inuersions from towne ditches, sew-
ers,

ers, wayes, streets wilthes, do very much comfort and reuiue them.

So Virgill:

—Huc summis liquantur rupibus amnes
Felicemque trahunt limum.

Also,

Et cum exustus ager morientibus aestuat herbis
Ecce supercilio cliuosi tramitis vndam
Elicetilla cadens raucum per leuia murmur
Saxa ciet, scatebrisque arentia temperat arua.

The Riuer.
Nilus.

So the Egyptian Soyle (though it bee a blacke and battle layer) deriues the abundant fruitfulnessse from the Riuer Nile, whose inundation supplies the want of raine, and feedes and fattes the Earth with the slime and mud left behind it.

But I shal be tared for this tedious penning of those petty experciments, and therefore I will omit to speake of the parti ular bestowing of Salt, Soote, Ashes and Powder of Hornes, Dissershels, &c. the infusion of Lupine flowers, Wine Lees, and the like, and so much the rather because their cost or scarcitie derogates from their goodnes in efficacie.

This may therefore serue for chearing of grounds, and consequently for enriching of the soyle.

C A P. XI.

Rectifying.

The Rectifying of Production, is accomplished by bestowing the grounds to purposes, suiting their appropriate Natures with due regard to the Sympathie and Antipathie, betwene Seedes and Soyles, Plants and Plottes.

Sande.

The great fast Yellow Sand, is not unfit for Graine
The close Sand with some earthy mixture is good for
Grazing; The White and dry for Woodes and Wilde
fruites

fruits; But a loose and light Sand swards slow and thin,
yet with rest and leeking sommers it yeelds good Corne:

More particularly:

Wheat craues a fat Clay (and dry to make it hard
and compact) and durty Sedage. Graine.

Barley loues a mellow Clay and a dustie March. Barly.

Rie suits with a Sandy soyle and drownes i'th hop- Ric.
per.

Beanes looke for a strong moist Clay, if you expect Beanes.
stiffe ware and great Burthens.

Deale presse for a putryfied Clayie mould of meane
strength.

Uetches are fruitfull in Creachie Countries.

Lentilis like well of a leane and vntilde Sandy
Soyle and a dry season.

Lupines loue dry Sand and Grauell and neede no
Plow.

Dates doe well in a leane dry Clay, though they
peele a better and prepare a moist.

But for rough dry and barren soyles Buck-wheate
is best to fill the measure and manure the fiede.

Spelt come in a fat moist layer degenerats from bad
to better viz. in thre yeres space to Wheat.

Tare, Cich and Mill loue moisture, this with loose-
nesse, that with fatnesse, the first with leannesse.

Pannicke is pleased with a leane grauelly or stony
Earth, so it be light and moist.

Medica in putri solo hyeme decocto & stercolato
vno satū amplius trecentis annis durat. Plinius.

Rice requires to be sowne in a fennye and waterish
layer.

Saffron loyes in a free Chaulkie or red sandie soyle,
indifferently husbanded, but manured with peats and
Doues dung.

Woad and Blaunch would haue a strong ground,
and this brokes well the roughnesse, yea in the coldest
clime,

clime, but the other must haue it in good plight.

Commin couets a layer that is fat, hot and putrified.

Hottie, Worme-wood or Wormeseede, loues both labour and a hot clime.

Caruwaies craue a good cleane & manured ground.

Ami-seede must haue a blacke rich mellow mould, or a battle and well-dunged earth: and those and other earely sowne seedes, doe neede a thin skrowing of Horse dung to rebate the force of frostie coldes.

Mustard multiplies well in a plot repleat with grauelly rubbish, but it would be moist and battle; and wel tilde also for the whitish seede.

Rapes require a broken-Dp lay and a rich layer.

Hempe looke for a fat moist laboured land plowed plaine and deepe.

Line loues a meane depth, but a very fine light, gentle and fat mould, yet a leane layer refines it, and Plinio commends Grauell.

Roots.

Rootes require fat, cleane, loose and light grounds, as Potatoes, Earth nuts, Turneps; and this in sandy layers, growes more sound, firme and delicious.

But clay produces sound, dry, delicate and large-Parleneps, and enlarges the Parslies Rote.

Dryons, Chiballs and Chines thriue well in a red short, murly and moistish earth.

Garlicke delights in a dry vndunged but laboured ground.

Sowbread likes both labour and Compost: so doth Teasell with flattes two foot and an halfe deepe.

But large and long rootes must also haue their layer deepe and well dunged in the bottome, if you would enlarge their growth: as for these Beateable Rotes, Parsnep, Carrot, Skirrot, Radish, Coates-beard, Caruwaies, Pirphis.

And the like for Medicinable Rotes, as Endiue, Succory, Scammony, Aristolachia.

But

But if you intend a plot for seedage, let their beds bee incorporated in a medley of mould and dung.

Liqueice runnes downe with straight smooth rootes in a light loose battle and cleane laboured bed of 4. or 5. fote depth and bredth wel manured with stall-dung & Columbine Marle.

Nadder respects not so much the strength of the ground so it be light moist sandy free well-dunged and digged 6. fote deepe and broad.

Cringoes shoote forth long rootes to a large but shallow extent, in a rough dry sandy and stony shoare.

But generally strong and long rootes neuer Sympatize with firme hard and solid soyles; nor the fibrous and slender with light and loose layers.

Artichokes, Beetes, Beanes of Egypt proue best in fat moist and laboured plots.

Olera.

The fat Ground for Whaselles or Kidney Beanes and Carduus Benedictus, with moderate warmth for Corianders Mandrake and Balme, with labour for Spikenarde, with moistnesse and lightnesse for Lettice and Purslaine, with spunginesse and cleannesse for Asparagus, with closenesse for Basil.

The Coley-florey, Rape-cole, Muske-melon, Cucumber, Courd, Pumpion, Thorne Apple, Apples of Loue, Spinnage, Arach, Sun-flower, &c. must haue hoisedung labour and a fat layer.

Lekes looke for a loose, plaine and battle plot.

The meanly fat with dunging and digging, for Coleworts, and Cabbage.

Sage is suited with cold clayie Earth.

The leane layer for Asarabacca, Time, Cammannile and dry for all, stony for two last, with rubbish for Capers and Orobus.

The stony grauell gratifies Fennell.

Rubbish with fine dry earth is a repast of best relish for the Rose, if rough bricke and hot, for Rue.

Hearbs.

The rough dry and barren soyl Plowmaus Spike-nard.

Rough leane layers suite both Sauouries.

The Chalice or Chin-cough Mosse creeps along the barren dry grauelly ditch banckes.

The dry earth for Peionie, with sand for Paunces, sand and stones for ground Pines, Bullein, Cgrimony and (if grauelly yellow) for Hauewes.

Dry stony layers are destinate to white Saxifrage, Bugle, Lauender.

Rosemary and Iesamines rampe vp in a rotten earth, mirt with rubbish or broken tiles and bricks.

The moist layer for Conuall-lillie, Peruincle, Bistorte, Dypin, Dimpernel and meanly fat for Mints and Calamint, with compost for Chiruill and (if olde) for Margerom, if battle for Dragons, and Liuerwort, if stony for Harts tongue, if laboured for Penicropall, if light for Endiue and Succory, if coole for Munchs Reubarb, and Betony, if stony and sandy for Parsly, according to the Etymologie.

The Fenny waterish Soyle by lakes and Pooles fits Comfrey, Toznesole, Butter-Burre, Marsh-Mallow, Clownes Mound-worke.

The Boggie, Sandy and Sunny plot, suits with Sun-dew, Marsh-Morts.

Spungie lowe grounds are good for Hops (so is a crumbling fenny layer) vntrencht and wet for the Dzier Hope which will parrallell the profit of the best Wheate in a rich soyle of equall ertention.

The Knot-berries and Cloud-berries climbe and clad the tops of Mountanous fells.

Marigolds, Clary, Melilot, Spone-wort contend neither for place, clime or layer.

And all soyles are acceptable to Burrage, Buglosse, Violet.

The Apple askes a fat moist mould, blacke or Ashcolored.

Peares,

Trees.

Pearres, Peaches, Wardens, a good clay.

Plumbes presse for a loose layer,

The Apricot, a hot sand, the Cherry a cole and moist
with some mixture of clay.

The moist plot fits the Ash, Agnus Castus, Tamariske
Quince, Seruice.

The Grauell if moist is best (and sand not admisse)
for the Elme, if stony for the Almond.

The Chaulke layer for Juniper & Pew, though this
brooke a light barren soyle.

Knee-holme thrives in a rough, dry barren earth.

The stony solid Clay is for Fig trees.

The blacke soft soyle for Chesnuts.

Philberds, loue dankish places, but Walnuts hate
them, and wish a hot soyle though meane in fatnes.

The Medlar and Corneill contend for a sand and fat
crust.

The sandy nitrous soyle serues best for Dates: San-
dy, light, leane and brittle for Birch and Birtle: but
these brooke no colde Regions.

Pome-granates, presse for Compost and hot Coun-
tries.

The Bay and Hulbery, beg a temperate aire, and
this eernes after fat manurings, the other rests satisfi-
ed with a leane layer, so that it be solid.

The mountanous hils, delight the Almond, Seruice,
Firre, Larch.

The Quince ioyes in the Plaines, so doth Wæch,
though Birches keepe the Hilles.

But the Indian Poly replenishes the lowly Vales.

Sunne.

Diuers Plants couet to bath in Sunny rayes, as
the Figge, Apricot, Peach, Plumbe, Quince, Cherry.

All which produce more delicate fruits being spread
vpon a South wal, to shield them from Northerne iniu-
ries, and reflect the Sunne-beames.

For doe many Hearbes with lesse pursuit of affecti-
on,

on, presse for the Sunnes enlivening comfort, as the Pe-
iony, Coates bearde, Sothernewood, Rue, Fennel,
Lavender, Ilope, Vints, Saffron, Carnations, Pinks:
Also Roses, Hoppes, Tyme, Spikenerd, Sage, the great
Sun flower and the Dyer.

But Turnesol with opposite eager eie al daylong ga-
zes in Titans face nere daunted with his eye-dazing lu-
stre according to the Poet: *Herba velut Clitie semper
petit obuia solem*: contrary to the Pudifetan which
dzoops by day, &c.

*In aprico quidē aëre multa fælicius vivunt, quæ densa
et crassa consistunt substantia, quoniam sole, ad calorē
lentum suum excitandum, & adducendum indigent.*

Shade.

But the shady reposeure refreshes the Bay, Tama-
riske, Red Winter Cherrie, Linerworthe, Harts-tongue
Betony, Margerom, Smallage, Asarabacca, Sow-
bread, Auens, Dragons, Mandrake, Perwinckle, Orpin,
Wimpernell, Basill, Strawberries, Louage, Sprea-
ding Tyme, Garden Cresses, *Cum multis alijs quorum
tenuis & subtilis facultas nimia aëris tenuitate dissipatur &
disperditur, ideoque densō optimē gaudent aëre.*

Sympathies. Yet Vegetables Sympathize with plots differing in
temperature from their Natures.

The hot and dry subtile Cedar crownes the tops of
the stony and snowie cold Mountaines.

And hot and dry Hearbes are produced in cold moist
soyles; as Pennie-royall, Margerom, Betony, Land-
cresses, English Sarisfrage, Marsh-mallow, hedge Hy-
sop.

The dry Adders-tongue, Cowslip, Prime-Rose, and
Teasill, ioy in moist and dankish places.

The hot and dry Smallage, Bitter-sweet, & Clownes
Wound-worthe, delight in colde and moist ditches.

For can the grauelly colde of rilling fountaines, extin-
guish the hot and dry temperatures of the water Cresse,
Becabunga, Agnus Castus, Butter-Burre, Gaule.

The

The Bog-berry retaines his colde and dry astringence, and Rosa Solis his hot and dry causticke qualitye, maulger the loose moissures of their layers.

Calamus Aromaticus hotte and dry craues a moarish couch.

The dry (though cold) and astringent Quæne of the Meddowes replenisheth the watry moist plaines.

The White Poppy colde and moist, couets a hot and dry place.

The colde Mandrake and Sycomore couet hot Regions.

The Cucumber, Gourd, Melon cold by nature couet hot stable-dung.

So Apples of Loue, of Aethiopia, of Peru and Mad Apples relinquish not their cold and moist temperature, notwithstanding their hot regions and Horse-dung.

Peculiar Composts are also requisite for refreshing of severall begetables. Composts, Peculiar.

Rue and Sage doe battle with bucke or other Ashes.

Rosemary requires Shæpes dung, horne-shauings byckie rubble, Tartar or Wine lees.

Liquerice loues Stall-dung, and Saffron the same, and Dones dung.

Fresh mould medled with horne-shauings, is the best bed for the Vine.

Lime-stones fertilize both Vine and Oliues, and the dropping Vine reuiues with the owne Ashes.

In planting of trees it is good to mire Sand-stones and old shells with the mould and dung, the reason is rendred by the Poet.

Quæcunque premes virgulta per agros
 Sparge fimo pingui & multa memor occule terra: *Spiritus In-*
 Aut lapidæ bibulū, aut squalenteis infode conchas; *trabit & Se-*
 Inter enim labentur aquæ, tenuisque subibit *minaria*
 Halitus, atque animos tollent fata: Iamque reperti *Plantarum*
 Qui saxo super atque ingentis pondere testæ *erigent vigo-*
rem suam.

Vrgerent : h c effusos munimen ad imbreis:
Hoc, vbi hiulca siti findit Canis  stifer arua.

**Pitre and Dile doe make Beanes great, tender and
sooner sod.**

Semina vidi equidem multos medicare ferenteis
Et nitro prius et nigra perfundere amurca,
Grandior vt fetus filiquis fallacibus esset,
Et, quamuis igni exiguo, properata maderent.

Quidam si (faba) triduo ante satum vrina et aqua ma-
ceretur pr cipue adulescere putant. Vino semina perfusa
minus  grotare existimant.

Antipathies.

**But as there is affinitie betw ene Plants and Plots,
so is there a kind of Enmitie and naturall repugnance.**

**The Rose and Colewort abhorre grauell and sand;
nor do the Cheshnut and Fennel brooke too sandy a layer.**

**And dung it selfe is an enemie to Penny-royal, Rue,
Ferne, Garlick, Flower-de-luce, Plumbe, Cherry,
Tine.**

**Neither doth Slope or Sage delight in dung or fat
soyles.**

And although diuers Vegetables are indifferently
bestowed in soyles aires andclimes, not so precisely suit-
ting their propper erigence and that with good successe;
yet could Plots of peculiar temper be conueniently con-
triued, no doubt their productions would bee much
bettered either in quantity or qualitie.

Chiefe Pro-
ductions.

And hence it comes that we haue in cheife request the
Heston Wheate, Fulham Parsenep, Hackeney Tur-
neps, Sandich Carrot, Walsingham Saffron, Wozken-
sop Liquerice, Wirtport Hempe, Birton Wippin, Cam-
bridgeshire Dearemane, English Hops, Hony and Ju-
nsper, Walliwel Masse, Teukesbury Mustard, Droit-
wich Salt.

So forren fruites, drugs, simples.  c, are as farre fa-
med as fetched, for preheminence in meliority, acquired
by appropriate ayre and layer; as Candy Dyle, Oliues,

Et

Cypres, Zeilan Cloues, Palestine Dates, Arabian
Birrh, Banda Nutmegs, Malauar Cinamon, and
Pepper, Stegonian Frankencense, Iaua Saunders,
Persian Bezar, Canarie Sackes and Sugers, Quieto
Muscatell, Cracus Tabacco, China Rice, Ruber be
and China Rootes, Quito Perchoacan, Italian Solu
bread, Chauchinchina Purcelain, Prussian Amber, Ve
nice Turpentine, Spanish Cordoua, Malta Cottonwool,
Camba Turbith, Syrian Scammonie, Norway Firres,
Apulian and Tarentinian Woll, Apulian Warley,
Dates, Hearbes, Melons, Lemons, Siuill Oranges,
Indian Ebony and Iuory,

So Masticke of Chios, Sene of Alexandria, Potatos
of Virginia, Zarza parilla of Peru, Lacer of Syrene.

*Hic segetes, illic veniunt felicius Vux,
Arborei fetus alibi, &c.*

Nec verò terræ ferre omnes omnia possunt.

Experience also shewes that the Change of Soyles Change of
for Seed, is not the least point of Fertilage; as to bestow Seede.
Clay Corne in sandy soyles and contrary.

So the leane Vine is best fitted with a fertile soyle,
and the fertile with a leane.

The thicke and rancke braunching Vine, must bee
restrained from immoderate spreading with a solid and
compact layer: the thin brauncher needes a battle soyle
to enlarge the Dilation.

And Plinie saies that in Venafrano their Vines are
best fitted with a glareous soyle, viz. dry, leane and crea-
chy; but in Betica the fattest layer is fittest.

But the exact and full knowledge of severall soyles
with their due and peculiar mastering, subduing, prepa-
ring, compassing and imploying, with their severall or-
ders and seasons for fallowing, twifallowing, tri-
fallowing and seed surre; as breaking-up, stirring, cru-
shing, setting-up, casting downe, requires more copious
handling in some peculiar volume. It shall suffice
in this Compendium, to haue giuen onely this superfi-

ciall touch or taste, relinquishing the perbestigation of the secrets of Agriculture to more capable and ingenious spirits.

And hether to of Tillage; Ground plots succède.

CHAP. XII.

Ground
Plotts.

Ground plots are proiectures, eleuations, and all fundamentall contriuances, destinated and accomodated to some speciall and proposed ende. And they are either Internal as Vaults, Cellers, Caves, Sincks:

Or Externall, as Groues, Arbours, Bowers, Cabinets, Allies, Ambulatories, Mounts, Mazes, Snalles, Cocke-Pittes, Bowling Grænes, Hoates, Pondes, Stewes, Draines, Dammes, Sluces, Mities.

To these may be added Rammers, Counter scarpes, Ravelins, Forts, Flankers, Mammures, Curtins, Parapets, Sconces, Cavalires, Pallisadoes, Bulwarks, Bastions and such like fortifications.

But I haue bene too prolix in the Subject: I will be more compendious in the Adiunct.

CHAP. XIII.

Adiunct.

Labour and Arte imployed about the Adiunct comprehends the Leuying and Erecting of Edifices, and Engines, in or vpon the Subject or Plot.

Edifices.

Edifices are either Principall; as Minsters, Monasteries, Churches, Chappells, Pallaces, Courts, Castels, Manour & Mansion howses, Mesuages, Watch Towers, Lodges, Cottages;

Or Collaterall, as Darie howses, Conduit howses, Stables, Barnes, Granaries, Maltings, Mil howses, Dove Coates.

Also

Also buildings of Pleasure and prospect; as Tennis-courts, Banquet-houses, Towers, Theaters, Amphitheaters.

And buildings of Monument, as Piramides, Labyrinthes, Obeliskes, Statuaes, Tombes.

Engines are either Militarie; as Battering-Rams, Engines. Sowers, Horses, Tortuses, Trepanes, Biccols, Towers, &c,

Or Ciuill, as Mills, for Siewing of surrounded grounds, sawing of Timber and Board, beating of Hempe, Iron Mills, Blomaries or Finaries and Hammer Forges, Crist milles, Gun-powder mils, Paper-mils, Fulling mils, Shere mils, Turne-broach milles, Dyle-mills, Barke-mills, Wadder mils, whether they goe with winde, water, hand, or horse.

Likewise Cranes, Pumpes, Aquaducts, Conduits, Coates, Sluces, Tonnells.

And thus haue I passed thorow the Matter, being the first Essentiall part of Possessions: It followes to speake of the Foyme.

G 3

THE



THE
SYNOPSIS OR
EPITOME OF SUR-
VEY METHODIZED.

SECTION. II.

*Discoursing of the Residence and laying of Grounds,
their increase, Boundage, and Neighbourage; and of
the admeasuring, calculating and projecting of lines,
surfaces, bodies, Edifices, composing and tricking of
Plottes.*

CHAP. I.



De Forme Consists in Situation Forme.
on and Proportion of the Sub-
ject, and Adjunct; and in the
practise thereof, the Mathemati-
call, and Mechanicall parts are
most perspicuous.

Situation, may be said to be Situation.
Resident, and Respicient.

Resident Site depends vpon the setting, laying and
lying of the grounds, and is either Primarie viz. the Primarie.
Maine

Maine Foyme & proiecture of the Base and Body of the Soile, wherin it is remarkeable to obserue, how it is projected in Plaines, eleuated and lifted vp into Hills and Mountaines, debased into Dales and Vallies, or wauing in moderate swellings and fallings, ascents and descents, &c.

Secundarie.

Of Secondary bearing reference to a further residence of the Soyle, especially if it bee arable; And then we are to consider whether it be laid in due and appropriate position suitable to the qualitie and exigence of the Habitude.

*Selio est terra
elata inter du-
os sulcos.*

Ridges.
Flats.

Arable grounds are eared in Selions and that either Flats or Ridges.

The first is necessarily required in light and leane land, to the end it may the better retaine any inforced vertue, against the washing away by showers.

The second are either laide in landes or Ridges large and high or round; or in Stitches.

The lands or Ridges are fittest in fat strong and fertile grounds that be tough, stiffe, binding cold and wet, least the fatnes should suffocate the sēde, or the soaking cold obtunde and dull the native heate and confound the vigour thereof: and in such soyles it were frugall prouidence to spare from the plow a grasse balke of some competent breadth.

Stitches.

But small Ridges or Stitches are accomodated to cold and stiffe ground inclining to barrenesse, to prevent constipation and binding together of the soile, wherby the sēd wold sooner burst with swelling, than get free passage for sprouting. And these Stitches are common in Norfolke and Suffolke, even in their light grounds, and in Hartfordshire where the Tilthes are rich: and though the Irish soile be neither immoderately colde, stiffe nor barren, yet their tillage is generally eared in small Stitches, peraduenture for that the soile is so apte to fast matting and swording.

Plinie

Plinie approues the best Situation for a rich Plot to be a plaine declining into the South from the foote of a Hill: so the Poet. ——— Quiq; editus Austro.

C A P. II.

Respicient Situation hath dependance vpon Boundage and Neighbourage.

Boundage is the compassing and describing of Plots with their buttalls, metes, bounds and Coastage.

Boundage is either contiguall or Remote.

Contiguall Boundage prescribes & limits forth the extention of lands, by immediate and selfe continuance of the confining Boundaries; & is either simple or compound, both which may be either Active, intimating that the fencing or inclosing of the Plot appertaines to the Possident; Or Passive inferring that it is inclosed or laid in seueraltie by the adiacent.

Simple Boundage is Confrontage and Collaterage, both which with all other Boundages are capable of diuers peculiar variations deriuable from the diuersity of the causes and occurrents obserued in perambulation.

Confrontage Active may enter the Plot with these or the like Epithetons, Abutting, Heading, facing, fronting, freighting, &c. Or Passive headed, faced, &c.

Collaterage Active, as siding, surrowing, balking, dyling, haying, hedging or shawing, immounding, impayling, immuring, skirting, Girding, verging, mazing, couruing, & recouruing, bordering, confining; also lying, Bounding, extending betweene: Or Passive.

Compound Contiguall Boundage is more significant, as side haying, head shawing, &c. likewise bounded, limited, prescribed, compassed, included, terminated, determinated, collaterally, triangularly, quarterly,

D

cir.

circularly, irregularly, or as the Agent. Or more particularly, as with some angle, point, corner, or stripe pointing, shooting, running, extending upon, &c.

And sometimes this Compound Boundage implies a mutuall proprietie or duety participable to the Conterminants, as banking, balking, dyking, drayning, sewing, sewaging, rilling, brooking, riuaging, &c. And alwaies confining the conterminants with the particle Cum: And yet more specially, as head-diking, side-sewing, &c. and the like Passiuely: and any of these may be admitted into the rough booke.

Remote.

Remote Boundage is requisite for retrieving and manifesting the locall proiection of Plots in supply of the defect of memorie and metes and markes contingent; and is accomplished either by Objects remarkable (inuisible are improper, though our Hollanders, will needes bound their Coast lands upon Normandy mistaking it for Normandye stumbled upon in some obliterate deedes, where Germanie might better be admitted.) as Mountaines, Hills, Towers, Steeples, or other Edifices, Trees of super eminence and Markes, and sometimes waies, balkes, hedges, Riuers, pits and such like, may effect as much being lined, rainged, rectified, opened, disclosed or cut by extention of common right lines from fixed or noted stations.

There is another species of this Remote or Mediate Boundage, where the Plot extends not fully to the Meets or Bounds described, but is intercepted by some smal Intermediall; as Balke, Meere, bancke, lane, path, Kill or such like; but this manner of Bounding, though it be frequent, is improper and defectiue, wanting that perspicuity which should giue due Validity to all Records.

Degrees.

Or by Degrees of angular production obserued by some Dioptrall instrument, whether by taking the angle,

gle, it makes with some permanent marke, or the swarving of the Line or Needle from the Meridian.

For Coastage as East, Southeast, South, &c. it is inseparably incident to all Boundage, as the most Materiall and Essentiall part thereof, and in the recording thereof a vigilant and circumspect care is required to prevent errors.

And th us much for Boundage.

Coastage.

CHAP. III.

In Neighbourage it is not impertinent to particularize, how the Plot is accommodated for Tillage, Meddow, Pasture, Wood, water, Fewel, Fish, Fowle, Ayre, &c. as also the Confinage with Champion, Wood-land, other Lords and Mannors, with the Commodities and conveniences deriuable from the propinquitie and competent distance of Cities, Townes, Markets, Faires, Ports, Hauens, Seas, Forrests, Woodes, Wasts, Commons, Meres, Moores, Riuers, Quarries, Mines, &c. by opportunity for vent and intercourse of passage for Commerce, and inter-parlée for Conuerse, &c. with the Maiors and Venues to the same & their conueniency of Conduct, as by land ouer smooth, facill and firme plaines, and by water, nauigable Riuers, loughes, Lakes, &c.

Neighbourage.

And this may suffice for Situation: It followes to speake of Proportion.

CHAP. IIII.

Proportion.

Proportion consists in the generall Modell and particular Modulets of the Plot, and procreats Mensuration and Content.

Lineal Fals.

Mensuration is conuersant in extending the lineall extentions of longitudes, amplitudes, crassitudes, altitudes, profundities, arches, circumferences, &c.

Lineall dimensions are diuersified according to the custome of the Country, as Inches, Palmes, Spannes, Fēete, Cubits, &c. and their composures and graduations are from Barley Cornes; as thrē Barre Cornes in length make an Inch, thrē Inches a Palme, thrē Palmes a Spanne, one Span and $\frac{1}{2}$ or twelue Inches make a Foote, one Foote $\frac{1}{2}$ makes a Cubit, two Cubits or thrē Foote makes a Yard, fīue Fēete make a Pace Geometricall, sixtēne Foote $\frac{1}{2}$ make a Pearch, Pole or Lug, forty Pearches make a furlong, whereof eight make a Mīle, and these are by the Standard measure of England, tho some of them in name bee but confirmed by Custome.

Perches.
diuers.

But the Pearch in diuers places is of different extent, as eightēne foote in some Countries, in others twenty one, in the Country of Stafford twenty foure, and twenty fīue in the Forrest of Sherewood.

And these dimensions are found or perfozmed either Cominus or Eminus.

Measures

The first with Palme, Foote, Pace, Rod, Rāipe: but vsually the Rule is most in request for Board, Stone Timber, &c. and the Chaine for land measure.

Decimated

And to accomodate these for exact and expedite operation disine or deuide each foote of the Rule and Perch of the Chaine into decimals or Tenths, and each Tenth or Prime of the Rule into Seconds, but it shall suffice to

to diuide the Prime of the Chaine into two lincks, with three rings betwene euery lincke to keepe it from crossing.

The second is retriued with Plaine Table, Theodeſite, Sector, Circumferentor, Geodeticall Staffe, &c. Or without instrument by the same Geometrical grounds.

The first being accomplished by approach or contingence needes no amplification, but for precise keeping in the Wadd or right line.

The Wadd is delineated either to a marke in sight Wadding, or out of sight.

If the first; let the Chaine leaders Wadd vpon the marke by some intermediall eminence and at the setting down of euery picke, let each man waue his mate into the right Wadd.

If out of sight and in Champion not much swelling, it is expedient to place two Assistants, the one at the marke, and the other at the eminentest Medium, and then your selfe standing at (or directly beyond or short) the station given, and the first Assistant erecting some visible object, waite the Wadders into the Wadd. The like by Night with lanthorne or Torch-light. Or from some eminent Mount or transcendence (beyond the marke and in the same extension) surmounting or Surueying the whole tract, pursue the Wadd.

But if the place cannot bee brought within view, instrumentalize the tract at Randon, the difference of intersection, found by protracting the trauesse or by angular comparison, shewes the point or degree to be pursued.

Now for remote lines the operation is produced by the doctrine of Triangles, one side and two angles, or one angle and two sides being given; As to instrumentalize a distance, first point forth two competent stations, and from the first quantulate the angle betwixt the marke and second station, and at the second station take the

Cominus.

To a Place
not in view.

Eminus.

Calculation. the angle betwixt the first Station and marke: Now the solution may be wrought either by Calculation or Projection.

The first depends vpon the knowledge of Sines and Tangents, and is founded vpon this Theoreme.

In all right-lined Triangles the mutuall proportion of one Latus to another, is such, as the Sines respecting their Angles are proportionall.

But for as much as this conclusion is more familiarly found out by protraction, I will deferre the Proposition vntill another time.

Projection. By Projection: Protract or project first a line representing the stationall distance, and from each extreame extend a line including an angle equall to the peculiar angle found: the intersection of these two lines demonstrates the marke, and the distances are manifested by the Scale.

The same reason serues for heights and depths.

And by the continued progresse of such operations the Plots and Maps of landes, tenements, Cities Townes and Countries are produced, &c.

C H A P. V.

Plotting. The Plotting of lands and possessions comprehends their Topographickall and Mathematicall Description, and Consists in Delineation & Tricking.

Delineation Delineation is conuersant in pourtraying the Types, Surfaces, and Scheames of the Subiect and Adjunct.

Plaine-Table And for exact working of both these, the Plaine-Table is most accomodate: for the vse whereof and of other instruments there are peculiar Treatises extant, and therefore I will onely touch some fewe Rules in brieve.

To Plot with Plaine-Table.

At each alternate angle produce diagonalls for plant lines to the antegrade station, and so compass the Plot.

To

To Plot a field at 2. or more stations.

Extend lines from each station to euery marke (chayning the stationall line onely)

To Rectifie the $\begin{cases} \text{Plot : diagonall alternate angles.} \\ \text{Table : retrograde the Ruler.} \end{cases}$

To Rectifie the stationall line

From some competent plaine, instrumentalize the leuell distance.

To retriue leuell or horizontall lines and angles in vn-leuell and hypothenusall Plots.

From 2. or more competent stations vpon a plaine (either naturall by position or rectified from remote) in the Plot or adiacent delineate the whole Plot. And by this Plot to giue the true content, note each line with the superficial dimensions found by the Chaine. Horizontalls

To Plot irregular Arch-lines.

From the mids of the Chords extend a perpendicular to y Arch, or project a Triangle by producing 2. Crures from the Chords extreames : a iudicious eye (rectified with these mensurations may (ad vnguem) picke downe the Delineations. Irregulars.

The best way to expedite the exact Plotting of mixte irregulars, and consequently of any Fielde.

Plant not the Table at euery Angle, but to prevent pulling and to assure a iust closing, extend from some fewe Main Angles (or competent stations in the Plot) Base lines (secants, contingents, parallels, &c.) for Boundaries or delectable Plant-lines, and from conuenient distances in the same, distantiare euery By, dispersed in the Plot, and so picke forth the Angles, Curues and Deniations. Generall.

For Delineating of Adiuncts, as Edifices and other erections, the Prospective glasse is facill & compendious; but for want thereof take this generall Rule.

Project all Plumbe-lines in Parallelisme perpendicular to a Parallel or supposed Common Base of conspicuous eminence. Plotting of
Architecture

So

So the Base of the Building projected in due Site, the modulets right angles by peculiar erection retaine like qualitie in Plano ex opposito, but ex obliquo they doe alternately appeare acute and obtuse. Other Deslineations dependant succeed by consequence, and the eye by serious obseruation of Stationall aspect may with facilitie giue the Umbrage: but the Transposition and fore-shortening of some lines require more particular Rules, which with diuers other matters I am here constrained to cut off, least this worke intended for a Breviat, should grow vnto too great a Volume.

And therefore for this time this shall suffice for Deslineation.

CHAP. V.

Tricking.

The Tricking of Plots consists in Complements, and Compartiments.

Complements comprehend the Flie or Flies, Scale and Compasse, Balender, Characters, Colours, &c.

The Flie.

The Flie is a Card diuided into eight, sixteen, thirty two equall parts in the Limbe with competent extension to shew the Meridian and Coastages of the Plot.

Meridian.

Meridians are diuers wayes found out, but most speedily and exactly by helpe of a Dyall, or by striking a line vpon your Table, or erecting poles vpon your Plot in a right line, directing to the Cynosure or Pole starre, when it is perpendicular to Allior the Chyl horse of Charles Maine.

Otherwise at the Sunnes first cutting of the Horizon, strike a line towards the same vpon your Table and erect a marke in the field-line: At the Sunnes going

ing downe (the same day) plant your Table as befoze by helpe of the marke erected, and strike another line to the Sunne from the first point : Now describe a Circle vpon this stationall point to cut the two extended lines at equall lengthes : The Diameter that mediates the Arch of each Sector is the Meridian, &c.

The Scale and Compasse are no lesse requisite, and may be florished with Fruitage or Imagery.

Scale.

The Kalender or Index serues for a Directory to expedite the intimation of particulars with signance of due Characters.

Kalender.

The Colours would bee appropriated and suited to the seuerall Modulets of the Plot to distinguish their Natures, Tenures, Owners, or such like : ——— As

Colours.

Arable for Corne may be dashed with a pale Straw-colour compounded of Yellow Oker, and White leade, or of Pincke and Verdigreece.

Arable.

Meddowes may be washed with a light Greene by taking more Verdigreece and lesse Pincke.

Meddowes.

Pasture would be put into a deeper Greene made of the mixture of Azure and Smalts with Pincke;

Pasture.

Heathes and Fennes may be distinguisht with deeper Greene deriued from Yellow and Indico.

Heathes.

Trees may haue a sadder Greene composed of white Leade and Verdigreece.

Trees.

Barke, Blocks, Timber, Stone, &c. may bee fitted with Amber and White.

Barke.

Waies and Hud-wals, may haue white-leade with rust of Iron, or with Oker and Browne of Spaine.

Waies.

Water, Siluer, Glasse, Crystal, &c. may be represented with Indico and Azure or blacke Leade.

Water.

Seas may haue their greenish Skie-colour expressed with Indico (Smalts or Azure) White leade and Verdigreece.

Sea.

And thus, both these and diuers other colours with their due proportion, may with small practise be easily

produced and multipliyed; And it will suffice to tract the Verges onely of Land-Modulets whatsoeuer you please to signifie thereby.

But howsoeuer you bestow these Colours of dissemper, they must be ground and bound with Gum-water very thinne and bodillesse.

And it shal not be amisse to pounce the ground with a Stainsh Graine of burnt Allome and a double quantity of pounded Rosin both finely searced and lightly pammiced, thereby to preserve the Paper or Parchment from thoroowe piercing with the Colours.

Compartment-
ments.

Compartiments are Blankes or Figures bordered with Anticke Boscage or Crotesko worke, wherein Euidences or other Memorables may be abreuatiated.

And these may bee contriued in Parallelograms, Squares, Circles, Dualls, Lunaries, or other mixt or voluntary proportions compassed and tracked ad libitū.

Under this Title may also be rainged the Lordes Coate with Crest and Mantells.

And these Compartiments with the Scale, Carde and Balender must bee bestowed in couuenient spare and boide places.

CHAP. VII.

Content.

Hitherto of Mensuration: Content in generall is Couchant and Crescent.

The Couchant is either Superficiall or Solid.

The first is of Land, Water, Board, Glasse and all Surfaces and Figures.

But before wee come to entreat of the Areas of Figure, it is not immateriall to enumerate how this Superficiall Content is diuersly distinguished for Land; as into Wearches, Daies Workes, Rodes, Acres, Drengangs, Pard lands, Plow lands, Podes.

There be also other quantities of Land taking their denominations from our vsual Coine; as Fardingdeles, Obolates, Denariates, Solidates, Librates. Foure

Four square Peaches make a Daiesworke, 10.
Daiesworke a Rode or Stong, 4. Rodes an Acre.

The Fardingdeale or Farundell (Quadrantata terra) signifies a Rode or $\frac{1}{4}$ of an Acre, so that if Obolata Denariata, Solidata, and Librata, doe arise in proportionable graduation from Quadrantata as the moneyes do increase in valuable Estimate, then must the Obolat be $\frac{1}{2}$ Acre, the Denariat an Acre, the Solidat 12. acres & the Librat 240. vide Crompton Jurisd: and Regist: Origin. 1. But we read Viginti libratas terræ vel redditus in Fitzh. 87. and Regist. Orig. 49. and 248. importing (it saies) so much land as yeldes 20. s. per annum.

Quadrantata
Terræ.

So you shall read further 249. Regist. Centum Solidatas terrarum tenementorum & reddituum.

But for Rodes and Acres, they differ in Content according to the power of the extent or lineall Fall of the Peach. Potentia rectæ est quadratum. Et dupla, ratione quadrupla proportione.

Acrarum
diuersitas.

Yet the Suruey, whether he be employed in Woodland, or Champion, in the Forrest of Shere Wood, where the Acre containes aboue $2\frac{1}{4}$ of Statute Acres, in Corne wal where it amounts almost to 140. acres, or elsewhere, howsoeuer Customes haue accrewed, must make his Computation by the standard: Notwithstanding that the Lords Demaines (as appeares by auncient Surueys) haue bene measured by the 20. fote Pole called Maior Mensura, and the Customary lands by a Pole called Mensura Minor viz. 16. $\frac{1}{2}$ though some claime 18. fote. So the French Arpent or Acre containing 100. square Poles is laid out in th' admeasurement of woodes by the 22 fote Pole, & this is called the Kings Arpent, their other lands are computed by the Pole of 20. 19 $\frac{1}{2}$ or 18. fote Poles.

Mensura
Maior &
Minor.

Arpent.

The Dre-gang, or Drengate (according to Skene) Bouata, called Bouata terra containes after the originall repote Terræ. 13. acres but we find it more or lesse as the custom of the place inures, and Bouata is properly bled of Lands in

Gainour viz. usually plowed.

Librata

Terræ.

Virgata

Terræ.

Foure Dre-gangs of land extend to a Pound-land (Librata terræ,) of old extent.

The Yard-land (Virgata terræ siue quatrana terræ) varies from 20, 24, 30 acres. M. Lamberd : and it is not reputed in Demesne, but in Gainor, as are also fodii a, minera, mercatus.

Carucata.

Terræ.

A Plow-land or Carue of land (Carucata terræ, that is, quantū aratrum arare potest in nouali tempore:) is said to containe 4 Yard-land at 30 acres to the Yard-land.

Hida.

A Hide of Land (Hida or Hilda terræ) is saide to be such a portion of land, as may be tilled with one teame (according to the severall tilthes and seasons) in a yere and a day, and so Crompton and the Autho^r of the new Tearmes affirme it to be 100 acres by statute, & ther by confound Hida with Carucata, or make them little different. Others say, that euery Hide of land containes 4 Plow-land at 120 acres, and 4 Hides a Knights Fee.

Feudum

Militare.

A Knights Fee (Feudum Militare) is so much Inheritance as is sufficient yearely for the maintenance of a Knight, and his competent retinewe with convenient reuenewe, which in the time of H. the 3. was 15 pound; but Sir Thomas Smith (Repub. Anglorum,) rateth it at 40 pounds per annum. But for the quantity of land, M. Camden recordes it to be 680 acres or 800 acres. After some computations it containes 5 Hydes of land, each Hyde 4 Yard-land at 24 acres.

In the Dutchie of Lancaster a Knights Fee contains 4 Hydes of land, each Hyde 4 Plow-land, each Plow-land 4 yard-land at 30 acres amounting to 1920 acres.

Cantred

Baronie.

Earledome.

Two Knights Fees make a Cantred, 2 Cantreds $\frac{1}{2}$ and $\frac{1}{2}$ make a Barony, one Barony and $\frac{1}{2}$ makes an Earledome : viz. 38400 acres.

But though these proportions of land doe not alwaies hold with their titles of honour, yet their denominations continue the originall institution, and howsoever

soeuer they be dismembred quoad quantitatem, yet the right and dignitie is indiuisible, insonmuch as if a Capitall Messuage be Caput Comitatus vel Baronie, it may not be parcelled.

And the Reliefe depends vpon the dignity (rather then the quantity) after the first allotment, viz. 100 s for a Knights Fee, 100 Marks for a Barony, and an 100 pounds for an Earldome. Mag. Chart. But to returne to the finding out of the Areas of Figures.

Dignities
indiuisible.

Reliefes of
Dignities.

CAP. VIII.

Figures with their Calculations for superficiall contents may be thus rainged.

To areate Figures.

1. Multiply the perpendicular in the demibase: vel Contra. 1. Triangles.

2. From the mediatic of the sides vnited, subduct each side seuerally; eradicate the ductat of the said mediatic and remainders. Ramus.

Multiply the length by the breadth. Idem. lib. 11. 6.

Square the latus. Idem. l. 12. 23.

* Multiply the semiperipherie by the perpendicular, from the Center to the midst of one side. Idem. 19. 1.

1. Multiply the Radius in the semiperiphærie. Idem. 19. 2. 1.

2. Multiply the quadrated $\left\{ \begin{array}{l} \text{Diameter} \\ \text{Radius} \\ \text{semiperiphery} \end{array} \right\}$ by $\left\{ \begin{array}{l} 11 \\ 22 \\ 7 \end{array} \right\}$ diuide $\left\{ \begin{array}{l} 14 \\ 7 \\ 22 \end{array} \right\}$ the pro- duct by $\left\{ \begin{array}{l} 14 \\ 7 \\ 22 \end{array} \right\}$ 19. 22.

2. Parallelo-
grams.

3. Squares.

* 4. Polygo-
nons.

5. Circles.

Multiply the Radius in the Demi-Arch line. 19. 4.

Turne it to a Sector (by protecting a Radius from each extreame of the Chorde to the Center) then worke vt supra deducting the Triangle. Ibidem.

Sectors.

Sections.

Adde the Base to the other Areas,

3

Multiply

Cones.

Multiply the side in the semiperipherie of the Base.

22.10.

Cylinders.

Multiply the altitude in the periphery of the Base.

21.12. In these 2. add Basall Areaes.

Globes.

Multiply the diameter in the Circumference. Or the Plaines Area by 4. R. 21.5.

Cubes or
Hexaedrons.

1. Multiply the Basall Area by 6.
2. Duplicate the squared diameter of the containing Sphcare.
3. Triple the square of the diagonall line.
4. Multiply the sides double by the Triple of the side. So much for Figures or superficial Content.

For Addition, Subtraction, Multiplication, Diuision, Reduction, Rule of three, &c. in lines or Figures, I wil referre them til the next impression, which I intend shortly to publish with much enlargement to the more compleat inuesting of the Arte, with due and appropriate Ornaments.

CHAP. IX.

Solid.

The Content Solid is of Timber, Stone, and other Bodies or Figurates, whereof a touch in brieft.

Pyramides
and Cones.

Multiply the perpendicular in $\frac{1}{3}$ of the Basall Area
R. 27.71.

Prismaes
Cylinders.

Multiply the perpendicular in the Basall Area. 27.6

Cubes.

1. Cube the crassitude; Or multiply it in the Basal Area.

3. Or the Axis in the squared diagonall line, Or the superficies in $\frac{2}{3}$ of the altitude.

Gloabes.

1. Multiply the diameters Cube by 11. diuide the product by 21. Ramus. 26.5.

2. Multiply the superficies in $\frac{1}{6}$ of the diameter.

Rett

Lesse then $\frac{1}{2}$: Subtract the altitude from the semidiameter, multiply the Remainder by the Area of the circular base, deduct the product from the semidiameter and conuere Sphericall superficies multiplied together, and diuide the remainder by 3.

More then $\frac{1}{2}$: Subtract the semidiameter from the altitude, multiply the remainder by the Area of the circular base, add the product to the semidiameter and conuere Sphericall superficies multiplied together, and diuide the totall by 3.

Globie
Sections.

To retriue the mutuall proportion of Cubes or Gloabs

Cube the seuerall Cubes sides (or Gloabes diameters) Multiply the Contents given by the Cube of the Figurate sought, diuide the product by the Cube of the knowne Figurate. And so much for Content Couchant.
Of Content Crescent in a woord.

CHAP. X.

The Crescent Content is of Increases renewing at seuerall seasons, and thence the denominations of Aestiuall and Brumall are deriued. Content Crescent.

The first is of Corne, Hay, Line, Hempe, Rapes, Woade, Fruite, Sommer-Verbage, &c.

The second is of Pastage, Edge growth, Winter-Verbage, &c.

In these Contents and Increases it is remarkeable to Recorde their Productions both in kind and proportion; as what and how much Grasse, Graine and other Growthes are vsually reaped vpon an Acre; how many Cattell such a Plot will Winter and Sommer, feed or keepe, &c.

And this shall suffice for Proportion.

THE

111



THE
SYNOPSIS OR
EPITOME OF SUR-
VEY METHODIZED.

SECTION. III.

*Capitulating the Natures and Incidents to Possessions,
Tenures, Landes, Titles, Fees, Discents, Tenants, &c.*

CHAP. I.



Hitherto of the Essentiall Parts: Accidentall.
the Accidentall Parts incident Partes,
to Possessions are comprehended
vnder Propriety and Valuati-
on.

The Propriety of Possessions Proprietie,
intimates their particular state
and condition, and may be deu-
ided into Vocall and Euidential.

Vocall Propriety denotates the Properties of par- Vocall
ticulars by due Appellation, which is either Nominate
or Cognominate.

The first is deriued from the Kinde and Species of Nominate,
the Particulars, and that either Generall; as Up-land

and

and

and Maritime, Woodland and Champion, Molland and Fen-land: Or Speciall; as Mealdes, Moulds, Blaines, Downes, Tales, Vallies, Mountaines, Fels, Hilles, Bogs, Bathes, Spawes, Mosses, Loughs, Mores, Fennes, Woodes, Coples, Heathes, Marthes, Meddowes, Pasture, Arable.

Cognomi
nate.

The Second deduces deriuation from Forme, Site, Climate, Obiect, Season, Person, Action or other circumstance; as Harpe Close, Mountacute, Golden-Tale Diffin Cluyd, Salisbury Plaine, West-woodes, Tale of Belboir, Lammes Pasture, Bel Acre, Beaumeade, Rightingale Lane, Lough Erno.

So much for the Locall Proprietie of Possessions.

C A P T. II.

Evidentiall.
Proprietie.

Evidentiall Proprietie decyphers the qualities and Attributes coincident to the Possident and Possession: and in the processe hereof the Legall part of Suruey is most eminent.

Possident.

In the Possident or Feudatarie his Title and Descend must be intimated.

His Title respects either Dignitie of Birth or Calling, Or Right of Possession.

Dignitie.

Title of Dignitie; as King, Prince, Duke, Arch-Bishop, Bishop, Abbot, Prior, Marquesse, Earle, Vicount, Baron, Knight, Esquire, Gentleman, Yeoman, Artificer, Labourer.

Right.

Right of Possession may be deuided into perpetuall and Terminall.

Allodium

Perpetuall is either Allodium or Feudum.

Allodium is an entire proprietie and perpetuall Right in Possessions without dependance; and this is proper solely to the King in Right of his Crowne.

And all the Crowne land within this Realme in the dayes.

daies of the Saxon King Edward the Confessor are called Auncient Demesne. Kitch. 98. Booke Tit. Demesne.

And these Landes in the generall Suruey called Domes-day Booke (made according to Geruafius Tilburenfis and Ingulfus, in the time of William the Conquerour) remaining in the Erchequer, are (as *Terra Regis* mongst others) recorded vnder the Title of Terra Regis.

Fitzh. inferres (13. and 14. Na. Br.) that no landes are to be accounted Auncient Demaine, but such as are held in Socage. Auncient. Demaine.

All other Landes within the Realme are called Frank-fee, (*Feudum Francum seu liberum*) which is defined to be a Tenure in fee-simple, of landes pleadable at the Common law, in opposition to the other, whose tenants cannot be impleaded out of the L. Court. Frank. Free.

Feudum is that which is held of a superiour by Service, Kent 92 both: Or Feudum or fee is a Right consisting in the person of the true heire, or of some other that by iust Title hath purchased or acquired the same: vide Bracton. Feudum.

And this is alwaies diuied either Immediately or Mediatly from the Crowne.

The first is where the fee resides stil in the first Feoffee.

The other is where the Kings Feudataries doe againe enfeofee others. The French terme the first of these Feifz and the other Arrierfeifz. Feifz and Arrierfeifz.

Feudum is either fee-simple or fee-taile.

Fee-simple is an absolute seisure to the Feudatarie and his heires for euer. Feodum simplex.

And though many Feudists doe holde that Feudatarius hath not an entire property in his fee, I may not conclude vpon Iacobutius his insinuated probabilities, that these fees (or some of them) were at their first creation temporary and not perpetuall and hereditary.

Tantum xvi longinqua valet solidare vetustas.

*Feodum.**Talliatum.*

Fée-taille or *Fée Expectant* is a conditionall seizure to the Feudatary and his heires with limitation, and is either Generall or Speciall.

General, is where a man is seized of land to himselfe and the heires of his body for ever.

Speciall, where the man and his wife are seized of lands to themselves and the heires of their two bodies.

The nature of this *Fée* is implied by the significati-
on of the word *Talliatum* which the Normans make *Tail-
ler*, and in Latine it is as much as *Scindere*: so this *Feo-
dum* or *Ius Talliatum* doth abscinde and cut off the be-
fore General successions restraining them to the parti-
cular Heires of Families, yet the locall possessions are
usuall transferred from one family to another, but
Dignities whether *Datiue* or *Natiue* are therewith nei-
ther conferred nor auferred.

Terminable
Right.

Terminall Right is either an Estate for life, as the
Dowagers, Graunties for life, &c. Or for Yeares, as
by Lease, Mortgage, &c.

Tenant.

And in respect of these and other seuerall Rights, the
Tenant is diuersly taken and vnderstood, and implies
aswell the Feudatary or Owner, as the Farmor or
Termor.

Dutie.

Tenant in the first signification sometimes imports
duety of Tenurage: as Tenant by Knight seruice, So-
cage, Tenant in Villenage, Burgage, Frank-Fée, *Te-
nens per Catapultam*, *tenens Nativus*.

Euidence.

Sometimes it intimates his Euidence: as Tenant
by Charter, Copie of Court-Roll, Verge.

Limitation.

Sometimes it implies the extent of his estate of right;
as Tenant in *Fée-simple*, *Fée-taille*, at will of the Lord
according to the custome of the Manour or by common
Lawe.

Sometimes it beares relation to the L. of the *Fée*;
as Tenant in chiefe, very Tenant, viz. holding imme-
diatly of his L. Mesn. Tenant Parauaile, viz. the lo-
west

West Tenants, & most remote from the L. Paramount.

There is also ioint-tenant, sole-tenant, tenant in Common.

Tenant signifying the Termer is diuersified according Termer.
to the erigence of the efficient causes of Possessions; as
Tenant in Dowre, by Courtesie, by Will, Lease, Co-
pie, Extent, Elegit, Execution, Statute Merchant, or
of the Staple, &c. And thus much for the Title.

C H A P. III.

Discent is the deuolution of Possessions deriued to Discent.
the Heire apparant from his Auncestrie, by vna-
voidable Right and Succession.

And this Discent is either of Bloud or of Inheri-
tance.

Discent of Bloud is either Lineal or Collaterall.

Lineal Discent is conueyed downe in a right line Lineal.
from Grand-father, Father, Sonne, Nephew, &c. And
here is produced an Heire Generall.

Collateral Discent springs soorth of the side of the Collateral
whole Bloud or Kinne; as Grand-fathers brother, Fa-
thers brother, &c. And in this case the Heire is saide to
be Speciall.

This Discent of Bloud is retriued by deriuage of Pedigrees.
Pedegrees from Auncestrie, by inherent Birth-right
and lawfull succession.

Discent of Inheritance is deduced by deriuing Se- Sequences
quences of Deedes from the Crowne, or from him that
had Pouell Fee. And both these are very requisite to be
intimated for the manifestation of the Validities of Es-
tates, whether the right dimaine from Heritage or for
raigne acquisition.

And hitherto of the Possident: It followes to entreat
of the Possessions.

CHAP. IIII.

- Possession.** **I**n the Possession the Nature and Tenure require to be indiciouſly diſcuſſed and recorded.
- Eminence.** For the Nature tis expedient to notiſie the Eminence thereof, whether Grande, as Honours, Courts, Caſtels, Manours, Seignories, Forreſts, Chales, Parks, Demeſnes: Or Petty, as Graunges, Farmes, Tenements, Meſluages, Cotages, Curtilages, Tofts, Crofts, Commons.
- Incidents.** In both theſe kinds diligent and particular enquire must be had of their Incidents, by Royalties, Prerogatives, Jurifdictions, Franchiſes, Priviledges, Liberties, Rights, &c. conferred vpon them by Act of Parliament, Statute, Charter, letters Patents, Graunts, or acquired and confirmed by cuſtome or preſcription.
- Lordſhips.** Hence comes the Lordſhip Marcher or Royall uſing iura Regalia. Vide Stowe 176.
- Courts.** And Forreſts haue their Courts of Attachment, Swaninote, Eyre or Juſtice Seate. So Markets, Faires, & Court of Pie Powders for Faires. Court Leete (Law day, or View of Franck Pledge) Court Baron. Alſo Wrecks, Swannage, Warrenage, Commonage, Viſcage, &c.
- Immunities.** Immunities and Exemptions from Theolonie, Pontage, Picage, Murage, Damage, Paſſage, Tranſage, Laſſage, Chiminage, Stallage, Caiage, &c. of all which Tenentes Honoris & Dominij de Richemonde per conſuetudinem Angliæ ſunt quieti per totum Regnum: ſo other Honours haue their Priviledges, as Amptſhil, Tickhil, Folkingham, &c.
- Auncient Demeſme.** The Tenants of Manours holding freely by Charter in auncient Demeſme cannot be impleaded, nor empanelled

panelled vpon Enquestes out of the same Manour, and they are Toll free for all things concerning their sustenance and husbandrie, and exempt from contribution towards the expenses of Knights of the Parliament or Shiere. Vid. Fitzh. Na. br. 14. & 128.

Infeoffing with Toll, implies Freedome from Cu. Toll. Home, &c.

With Caruage, from taxation by Carues.

With Bruckboote, from repairing and reedifying of Bridges, with Burghboote, from the like for Castels.

Foot-geld implies a Priuiledge to keepe Dogges within the Forrest not expeditated or lawed sans controule. Foot-geld.

Horne-geld freedome from tare for Horne-beasts there.

Waives, Weifes, or waived goods, import all goods and chattels, which being stolne, are left or forsaken by the thiefe in his fugacie. Waives.

Infangthef enables the L. of the Manour to iudge of Felons inhabiting within the Fee. And Vsfangthef, to iudge, or (at least) to execute iudgement of Felons apprehended within the Fee. Infangthef.

For Accrements to the L. of the Manour by Felons, not onely their goods both Reall and Personal are forfeited, but also their lands not entailed escheat to the Lord (Post annum diei n & vastum) except in Gloucestershiere where the lands reuert to the right heire after the Kings yere and day. Also in the Tenure of Gavelkinde in Kent, where the father to the Bough, the sonne to the Plough. Felonies.

Baronies infeoffed with Theame alias Them, haue power to dispose of Villaines their Children, goods, and Chattels. Theame.

Abisherfing, alias Missherfing, implies both forfeitures and Amerciaments of all transgressions within the Fee, and also the immunity from like penalties. Abisherfing.

Blod-

- Blood-wit. Blood-wit confers all Amerciaments of Courts for effusion of blood.
- Estouers. Estouers granted out of Woods or Forrests, include House wote, Hay wote, and Plow wote.

C A P. V.

- Tenure. **O**F the Nature of Possessions I haue spoken some what: The Tenure of Lands and Tenements, is the manner whereby they are helde of their Lords. Grande Cust. Cap. 28.
In euery Tenure the Confinage & Condition thereof are remarkable.
- Confinage. The Confinage shewes to what Lord, Honour, Castell, Manour, &c. the Seruice and Suitage (whereunto the Lands and Tenements are lyable) is due.
- Condition. The condition intimates the Nature of the seruice or duty which the Tenant, by reason of his Fee, oweth vnto the Lord.
- Seruice. This Seruice is by Hotoman defined to be Munus obsequij clientelaris; and this must be of ancient Commencement and continuance, sith it is not now erigible or to be created (but by the Kings prerogative) as parcel of a Manour, though it may by contract be established in a kinde of Seignorie in Grosse.
- Manour. For a Manour is a Seignorie or Dominium consisting of Demesnes and Seruices of long continuance; and these may be comprehended vnder parts Essentiall and Accidentall.
- Court Extinct. Here note, if the Lord so dismember his Manour, as that hee leaues not Freeholders, or if all the Freeholders saue one doe escheate, then is hee disabled to keepe a Court Baron for want of Suitors.
- Non-Parcels vnited. Land may holde of a Manour by certaine Seruices which

which may be Parcel of the Manour, and the land Non-Parcel; but by Escheat the Service is extinguishd, and the land comes in place and becomes Parcell in due consolidation.

But forraigne land cannot be vnited to a Manour, Manour di- yet may a Manour be deuided into diuers by Partiti- uisible.
on of Coparceners.

For can two distinct Manours by practise be made Not vniable.
one in perfect Union, howsoeuer such an innouation continued without contradiction, may in procelle of time become to be reputed one in name and vse, there being no Record extant to the contrarie: Yet one Manour holding of an other, may by Escheat be annexed to the same, and so be consolidated and become one in vse.

But to returne: Demesnes are all such lands, as Demesnes,
haue bene time out of minde helde in occupation and manurance, together with the Site of the Mansion or Manour House (called in some places Berries, Halls, Manour places, Courts and Court-houses) for main- tenance of the Lords house.

These Demesnes were called of the Saxons (who had the substance, though not the name of Manours) In- landt (and by Bracton (lib. 4.) Bord-lands) and the Ser- uices Vlandt in opposition, though it may in some sort be restrained to comprehend onely Lands, Tenements and Hereditaments yeelding Rents of Assize (viz. origi- nall and set in certainty) as for Freehold, Copiehold, or Customarie land; all which are Parcel in Service. Out-landt
how re-
straind.
Rents of As-
size.

For the Diuision of Services, they may be all com- prehended vnder Chiuallrie and Socage. Services de-
uied.

Chiuallrie, or Seruitium Militare, is a Tenure or Ser- uice, obliging the Feudatarie personally to perfoyme vnto his Lord some honorable or Martiall office; And this confers to the Lord (the Heire being in Non-age at the Fathers death) the Keall Services of Wardship, Marriage

Marriage and Reliefe, in lieu of the Personal Service, which the Heire in regard of minority is not able to execute.

Chivalry or Knight-service is divided into Regall and Common.

Regall.
Chivalry.
Capite.

Regall Chivalrie is solely confineable to the King, and is properly called Sergeantie. And this holdes either merely and immediately of the King as of his Crowne (which is a Corporation and Seignorie in Grosse) and is then further called Tenure in Capite or Chiefe: Or mediately of the King by reason of some Honour, Manour, Castell. Fitzh. Kitch.

Sergeantie.
Grande.

Sergeantie (Sergeantia or Seriantia) is either Grande or Petit.

Grande Sergeantie is where Lands are helde of the King by some noble Service, performeable by the Tenant personally.

Petit.

Petit Sergeantie is where Lands are held of the King, to yeld him annually some small military furniture towards his warres.

Common
Chivalry.
Escuage.

Common Chivalrie is that Service which may indifferently be confined to the Prince, or to a common person; and is called Escuage (viz. Shield-service) which is either Uncertaine or Certaine.

Uncertaine.

Escuage uncertaine is of two sorts: First, where the Tenant is Tenure-bound at his owne cost and charges, to follow his Lord in the Kings warres, or to send a sufficient man in his steade, there to continue according to the proportion of his Fee: viz. after the rate of 40. daies for a knights Fee.

Castell-ward.

Secondly, where he is bound by himselfe or his Deputy to defend a Castell, so oft as it shall come to his course or turne, and is called in this case Castell-ward. Ma. Cha. 20.

Certaine.

Escuage Certaine is where the Tenant is set at a certain pecuniarie charge (viz. 20 shillings for a knights Fee)

Fée) in lieu of such vncertaine Seruices, as aforesaide. And this leaſeth the nature of Knight-ſeruiſe, and is in effect Socage (though not mærely. becauſe it ſmels not of the Plowe) though it ſtill retaine the name of Eſcuage. Na. Br. 84. Litl.

CHAP. VI.

Socage (*Soccagium*) is a Tenure of Lands obliging the Feudatary to the performance of certaine inferior and husbandly ſeruices vnto the Lord of the *Fée*, ſans Wardſhip, marriage, Reliefe. Socage.

Socage is alſo capable of the diſtinction of Chiefe and Common.

Socage in Chiefe or Capite, is that which holdes immediately of the King as of his Crowne. Prærog. 41. Chiefe.

Common Socage is that which holdes of the King or ſome other Capitall Lord, by meanes of ſome Manour. Ibidem.

Socage is either Franck (*liberum*) or Baſe (*Villanum*.)

Franke Socage is where in lieu of ſeruice in kinde a ſumme of money is paid to the Lord. Franke.

Baſe Socage is a ſeruile kinde of Tenure, and is deuided into *Villanum Soccagium*, and *Purum Villanagium*. Baſe.

The firſt is, where a determinat ſeruice is performable by reaſon of the Tenement, and not of the perſon of the Tenant.

The other is where the Feudatarie is lyable to vncertaine and indeterminat ſeruice at the abſolute and inſtant will and demaund of the Lord. Bracton. & Na. Br. 94. Villanage.

Yet may a man ſans impeach of frædome (in regard of his perſon) hold in pure Villanage; For is *liberum* nor the Free-tenementum impeached to him that holdes it in Villano hold impea-

Soccagio, if it be to him and to his heires. Bracton.

There be other branches of Soccage, as Burgage, Frank-Almoine.

Copy-hold.

And Copy-hold (saith Kitchin 80) is a base Tenure, and was originally called Villenage, Fitz. 12.

Meere Copy-hold.

But (to retaine the moderne appellation) some of this is Meere Copy-hold, and escheats forthwith to the Lord by Felony. Kitch. 81.

And some is of more eminence, and held by Werge in auncient Demeisne, according to the Custome of the Manor, being in effect a kinde of Freehold (though reputed Copy) and yelds to the King Annum, diem & Vacum upon Felony.

Fines.

Some Copy-holds are fineable at the Lords will; and some only are lyable to a certain rate, and this is a kind of inheritance called Customary, not simply at the will of the Lord.

Customary.

But there is a kinde of Customary Land of the Ancient Dutchy of Cornewall and other places, where the Tenants haue no Transcripts of the entries of their admittances; And this was called Folke-land, and the Tenants may be termed Tenants by Court-Roll, according to the Custome of the Manour.

Folk-land.

But where the Tenants are, by reason of the Transcripts of admittances, called Tenants by Copy of Court-Roll, there the Land is Charter-land or Bock-land. Kitch. 86. 89.

Bock-land.

For the Definition of a Copy-holder, reade West in his Symbol. 1. parte. 646.

And for the various Customes of Copy-holders in seueral Manours, 'tis as needlesse as endlesse to capitulate or enumerate them in this Tractate.

Conuerſion of Fees.

But both meere Copy-holde may be conuerted into Fee, and likewise Fees changed from their first institution by feofment; as out of Chivalry for certaine yeeres by Rent into Fee-Farme, sans further duty than is specially

cially comprised in the Graunt, except Fealty alone, which by probability is still on foote, because it is inseparably incident to all Tenures. For whosoever is invested in Fee, though in the freest maner, holdeth per fidem & fiduciam, that is, by Fealty at least. Smith Rep. Anglorum. 3. Fealty.

And Dwarenus saith, that Fidelitas est substantia Feudi.

Fee-Farme is a Fee, and importeth a perpetuity to Fee-Farme, the Inuestee and his heires, for an annuall Rent of the third or fourth part of the Value. Fitzh. 210. But if the Rent reserved be behinde and vnpaide for the space of two yeeres, then may the Feoffour or his heires by Action recouer the Lands as their Demesnes. Britton. 66. And land thus held comes neere to the Nature of Ager vectigalis amongst the Ciuillians.

And hitherto of the Propriety of Possessions:
It remaines to intreate of their Valuations.

L 3

THE



1. The first of these is the fact that the
 2. second of these is the fact that the
 3. third of these is the fact that the
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 10. tenth of these is the fact that the

[illegible]

It remains to insure of their Valuations.

HIT

21



THE
SYNOPSIS OR
EPITOME OF SVR-
VEY METHODIZED.

SECTION. IIII.

*How Possessions are to be valued by reason of their seue-
rall issues, Rents, Perquisites, Priuiledges and other
profits, with particular respect to their Reuenues
and Reprises.*

CHAP. I.



THE Valuation of Possessions
consists in the due Estimate and
Prizall of all Parts and Parti-
culars Essentially and Acciden-
tally thereunto belouing: And
to the exact performance hereof
both the Materiall and Legall
Parts are very requisite.

Valuation.

This Valuation is either Reiterant or Determi-
nant.

Reiterant Valuation depends vpon the exact know-
ledge both of the Reuenues and Reprises.

Incidental

Reuenewes.

Under Reuenewes (or Esplees after Ingham) I comprehend all and singular Rents, Services, Issues, and profits accrewing and renewing to the Feudist or Possident by, through or by reason of Fees and Possessions.

And these Reuenewes may be said to be Conuentuall and Incident.

Conuentuall Reuenewes comprize al Rents both in Esse and in Posse.

Rents.

Rents in Esse are Receipts certaine or couenanted, and payable at daies and termes limited: and they are either Proper or Improper.

Proper.

Rents Proper (whether Rent-service, Rent-charge, or Rent-Service) may be for Landes, tenements, Pasture, Engines, Mills, Mines, Quarries, Warrens, Fishing, Fowling, Wood-sayles, Heath, Furze, Turbarie Pastage, (of Beech, Oake, Holme, &c.) Verbage, Brovage, &c. And Rent-Provision, as Beifes, Muttons, Venison, Fish, Fowle, Graine and other voluntarie reservations vpon graunts or estates for liues or yerres.

Improper.

Rents Improper are where, of an uncertaine and casual commodity, a certaine Rent or Receipt is by contract created & raised: as for Licences, Swan-markes, Profits of Fair es, Markets, Courts, Customes, Tollage, Pontage, Carriage, Cranage, Ferriage, Bonage, &c.

Posse.

Conuentuall Reuenewes in Posse are all issues and aduantages arising of Possessions not demised (though Rentable) and therefore necessarily valueable by Estimate: as Demaine-Landes, Timber, Manuells, Wastes, &c.

CHAP. II.

Incident.

Incident Reuenewes are either profitable as Perquisites, or Parallels to profits.

Per-

Perquisites may be diuided into **Renouant** and **Perquisites.**
Dormant.

Renouant Perquisites are Accretions acquired by Increase and Casualty.

Increase comprehends all profits deriued from the **Pregnance.**
Pregnance and Production of the Earth.

Of the first sort are **Stones, Petalline Dares and Mineralles** vt supra.

Of the second sort are **Wines, Pirry, Cider, Honey, Production.**
Ware, Bombace, Raw-silkes, Hops, Sumach, Pitch, Tarre, Campheire, Opponar, Taccamahacca, Caranua, Masticke, and other Gums: Likewise **Drugs, as**
Bechoacan, Bermez, Methium, Alkanet, Agaricke, Amber-Greece, Acacia, Lignum Aloes, Sassafras, Spikenard, Rubarbe: Also **Muske, Ciuet, Ben, Beniamin, Castoreum, Cantarides, Cochineil, with other Simples**
Fruite, Rootes. And **Furres** as **Armins, Sables, Minibers, Lewzernes, Martins, Beauers, &c.**

By **Casualty** are intended all duties and services **Casualtie.**
that be Appurtenant and Appendant to a Manour, whether it be Capitall or Non-Capitall.

Under Appurtenants, may be ranged all **Royalties, Appurtenants.**
Prerogatiues, Jurisdctions, Franchises, Priuiledges, Liberties, Seruices, Customs, &c.

And all emoluments and aduantages deriueable from them: **Perquisites of Courts;** as **Pleas, Fines, Amercements, Heriots, (Service, Custome, Couenant) Relifes, Aydes, Farewells, Waiaues, Estraines, Deodands, goods of Felons and Fugitiues (by speciall graunt) comorant in the Manour, Forfeitures, Escheates, Wards (in Non-age, Idiocy Lunacy) Marriages, Villaines, Treasure-Troue: Warrens of Birds, Conies, Hares, Commons of Pasture, Turbary, Piscarie, &c.**

Appendant are **Hospitalls, Patronages of Churches, Appendant.**
and **Benefices** (Valuable not in contriuing commodities by Church Chaffering, but equivalent in validitie

by reason of the priuiledge of electing, or presenting a worthy Clarke, (who must be Idoneus) to succorde and supply the vacancie of the Church) Also Common of Fishing, of Estouers, of Vicinage.

Dormant.

Regardant.

Dormant Perquisites are such things as are euer prest and ready at the instant commaund and pleasure of the Lord; as Villaines & Reifes, which are alwaies saide to be Regardant to a Manour. And to this place may also be indifferently referred Salt Naturall, Sande, Grauell, Marle, Earth and such other thinges as are alwaies disposcable by the Possident for deriuing an immediate profit or Reuenewe.

So much for Perquisites: Parallels ensue.

C A P. III.

Parallels.

By Parallels I intend all pursuites of wilde Game, which for moderate exercise of the body and delight full refection of the minde, are held in priuate esteeme of Pursuite, or in valueable validity of the Purchase of the Pray, equiualent to profitable Accretments. And they are either Generous, as Hunting and Hawking: Or Plebeious, as Fishing and Fowling.

It is therefore not impertinent to the purpose to intimate what seuerall Games are vsually found within the Precincts and Priuiledges of the Plot or Fee, and how the Countrie is accommodated for Chace, View, Flight, &c.

Hunting.

For Hunting, Record what Beasts of the Forrest there be, and how frequent: as the Hart, the Hinde, the Ware, the Boare, the Wolfe: Of the Chace, Buckes, Does, Foxes, Hartrones, Koes: In like manner what Beauers, Badgers, Otters, Wilde Cats.

Hawking.

First for Hawking: Fowles of Warren, as Pasant
and

and Partridge: then the Elke, bustard, Heron, Mallard, Ducke, Teale, Heath-Cocke, Kayle, Rock-doue, Pie, Black bird, Thrush.

Fishing is either in Fresh waters; as for Samon, Fishing. Trout, Carpe, Pike, Manat, Breame, Barbell, Tench, Perch, Cheuin, Dace, Roach, Ruffin, Geles, Lampreys Gudgeon, Minnowes, Crea-fish.

Or in Seas and other Salt waters, for the Sturghion, Turbot, Porpueis, Seale, Bret, Tunie, Holibut, Mullet, Rochet, Gurnets, Gilt-head, Bass, Dorce, Macheril, Whiteing, Hering, Haddock, Thornbacke, Codfish, Kerling, Hake, Dog-fish, Horne-fish, Conger, Lampson, Bowman, Soles, Playce, Buts: the Lobstar, Crabbe, Pearle-fish, Prawne, Sea and Wood Tortoise, Dyfsters, Conchyless, Winkles, Purples, Cutle, Cal-lough, Cockles, Muskles, Shrimps. Also for the Sea Pike, Carpe, Troute, Breame, Tench.

Fowling may be for the Bittour, Curlew, Mallard, Fowling. Wyntayl, Stockard, Duck, Teal, Snipe, Shouelar, Stork, Cormorant, Gaunt, Sheldrake, Cob, Olie, Puffin, Pewet, Parwhelp, Redshank, Ruffe or Reue: the Godwit, Gnat-snap, Knot: Gray, Greene and Ballard Plover, Quaille, Dottrill, May-Chit, Spawe, Churre, Pieper, Grindle, Skirwingle, Sea and Land Larkes: The Crane, Storke, Cocke of the Wood, Wood-Cocke, Heath-Cocke, Heath-Poote, Grouse, Turtill; with which the Cuckow, and Owle, may for their delicatie be ranked: then the Estridge, Birdes of Paradise, Canary Birdes, Parrots, &c.

Likewise for Hawlkes: as the Falcon, Jerfalcon, Tercel-gentle, Lanar, Lanaret, Leto, Jerkin, Saker, Sakret, Marline, Hobby. And short winged Hawlkes: as the Gosse-Hawlke, and Spare-Hawlke.

And this may suffice for Reuenewes: It Rests now to intreat of Reprises.

CHAP. III.

Reprises.

Repises are impositions and duties wherunto the Plot or Fee is in peculiar lyable; and they are Reall and Personall.

Reall.

Reall Reprises are al Charges and payments imposed, whether by Custome or by Couenant, for maintenance or repaire of Bridges, Sea-banckes, Hauens, Sluces, Jetties, Wharfes, Coates, Causeyes, Waies, &c.

Personall.

And in this Rancke may be Parshalled al Resolutes Dechashes, Decrements.

Personall Reprises are Seruices, Duties, and Payments by Tenure to the Lord or Lordes Mesn or Paramount: as Fealty, Homage, Escuage, &c. Court suite, Out-Kents, Bonage, Fines, Heriots, Relieves, Rel-pight of Homage, &c. Or by Graunt or Deed to Couenantes; as Kent-Charge, Crtents, Pentions, Portions, Fees, Corrodies, Salaries, Stipends, Dowres, Annuities, &c. to Diuines, Artists, Linguists, Lawyers, Patentees, Feoffees, Seruitors, Officers, &c.

Valuation Reiterant is thus decyphered:

The Determinant remaines.

CHAP. V.

Determinant
Valuation.

Determinant Valuation concludes and determines the Right and Interest of the Possident by Alienation of the Fee or Possession.

And in this Action, sith it is not Reiterable, it is expedient to retriue the utmost Value and worth; to which

which purpose that due prizalls may be produced, estimate all particulars both in Reuenew vt supra: And also Respective; as Edifices, Heire-Lomes, Engines, Timber, Tinsel, Ward-ships, Aduowfions, Villaines, Commons, Wasts, and other things in Grosse, with all Perquisites of like Nature.

Now by opposing the Estimation of Repzises to the Totall Valuation, the Remanet is rectified, and the true Value retriued.

And thus much for the first part of a Compleate Suruey.

F I N I S.

Briefe directions for orderly marshalling of Surueyes, for accommodating of Field-entries in Rough-Bookes, for Engrossements and their Exemplifications with framing of Terrars, Rentals, Custome and Court-Rolls, Particulars, &c.

For other Instructions and Presidents requisite for methodical operations in Surueying of Lands & Euidences, with formal Exemplifications incident thereunto, I must deferre them till the impression of the Second part.

In the meane time, not altogether to defraud the expectation of the diligent, I haue intimated these few Inductions ensuing, which though they may seeme too cursorie and incompetent, to giue full satisfaction and information for the due disposures of the copious remarkables, occurrent in a compleat Suruey, in fit Symboliographie; yet I doubt not but the ingenious Practizer may pick forth more ample Presidents, than may seeme (at first biewe) to be comprizable in the decurted Passages, as well of the former Tractate, as of this Supplement.

To Suruey a Panour: Out of the Series and Pro-

tas formerly dilated, contriue the Articles (suiting the exigence of the Seignorie) to be giuen in charge to the Iurie, and that in writing for more substantiall and direct proceeding.

The Tenants, both Feudataries and Termors, entered, the Charge ended, and their Estates summarily recorded, your Assistants ready, and all things prepared, proceede to the Suruey, describing Plots and noting in a Rough booke (in Folio) all occurrents as they fall remarkable.

And in this practise you are not confined to imitate or insist vpon the precedent Protasis or other President, nor abridged of a voluntary proposition of any other iudicious Method.

The alternate Pages may bee delineated into certaine generall and Collaterall Heads for expedition, as well of the entries instant, as of engrossments to be selected, noting all Extrauagants orderly in the appropriate parallel of the opposite Page; so shall you auoide diffused accumulations, which would confound and puzzle the speciall Head in marshalling forth particular and due contriuances.

Nor shall it be impertinent to balander or Characterize each Modulet of the Ploot with the rough Entrance, thereby to facillize and expedite the ingrossments incident, in contriuing whereof an indigested Chaos of obseruations, would much intricate you, in regard the order pursued in perambulation, must necessarily be inuerted in the Exemplification.

Page. I.

Tenant and Character.	Appellation. Place.	Boundage.		Mensuration.	Content	Improvement.
Hugo Elwood. A.	Bellham Greene.	E. Hayed.	M. Tremaine	P. 245.	a. r. p. 15.2.20	l. 10.
		W. Siewing.	Tb. Dewhurst.	255.	Rent.	Estimate.
	East-field.	N. { Shawing	I. Franckish.	100.	l. s. d.	l.
		S. {	C. Gifford.		7.10.0	150.

This Pasture is projected in large Ridges extended and declining South; the Soile is a sandy Clay of 18 inches Crust close swarded and well replete with Trefoiles, Cinquefoile, Ribwort, Dorlus, Parrow, and other grasing Verbes of good growth, with a Dayrie House in the N. W. corner of two good Baves, and a faire Pond 7 pole direct East from the House, springing from the West forth of a male grauell the Base of the Soile: the Hedge-Rowes are well growne and stored with Peare-trees and Apple-trees of good Fruite, &c.

1. In these entries the Tenant is both expressed and assigned his Modulet with the Character.

2. There are opposed Residence, Species, Habitude, Crassitude, Inuesture, Ground Plots, Edifices (Engines) the last 3 must also be plotted.

Now to Engrosse a compleate Suruey: Modulize Alternate Pages, and particulate the Opposite with due observations, and characterize the Euidences. Engrosse-ment.

To exemplifie the Engrossment without delineation of the Models, there is a method to be pursued in the particular Entries (according to their Eminences and kindes) of Estates and Euidences.

In Free holds Record the Possident, Title, Possessions, Free-hold. ons, Tenure, Descent and Reseruatiou.

In Copy holds; the Possident, Title, Possessions, Copie-hold. Habendum, Fine, Reseruatiou.

In Leases; Commencement, Parties; Demise, Habendum, Reddendo, Couenants. Demise.

In spirituall liuings; Site, Edifices, Glebe, Decimals, Reprises, Valuation, Estimate, Patronage, vicarage. Incumbent. Rectorie.

Meadowe, Pasture, Arable, require seueral Contents.

In the Entries of all saue the first, the Boundage & Extent of Cartelages must be recorded.

In

In Edifices and Engines their dimensions, matter, forme, and kepaire are remarkable.

Out of the Crenplification of the whole Composition and Body of the Suruey, these subsequents may be selected (viz. Terrars, Rentals, Customaries, Suit-Rolls, and Particulars) and thus framed.

Terrars.

Digest in orderly compofure, Edifices, Homesteads, Curtelages, lands, ground-plots, &c. with their qualities, sites, and proportions.

Rentallr.

Compose in computable digestment all the Tenants with their Tenements and Rents in particular.

Customaries.

Recorde in fit contriuance all and singular the Customes and Priuiledges of the Manour.

Suit-Rolls.

Inroll all the Feudataries & Suiters to the Court with their Fees, Tenurage, Rents, and Seruices.

Particulars.

Particularize Qualities, Contents, Rents (instant and improueable) Perquisites, Parallels and other Reuenewables and Respectiues, with vendible and distinct Estimates: Reduce all Reprises to a due Method and Record the Remanet.

Sequences.

And for retrining validities of estates, it is not impertinent to deriue the Sequences in Deeds from Antecessorie, and thereby to contriue Offices for the Tenure.

Offices.

Non-parcel.

For other the Lords Possessions comprised in the Suruey, and reputed no part or member of the Manour, they require to be recorded apart in the Infra, vnder the Title of Non-Parcels: Vizt, Churches, Chapels, Almshouses, &c. Also Patronages, Villaines, Commons, Annuities, and other particulars helde in Grosse.

Memorandum.

Register all Omissions vnder the title of Memorandums.

FINIS.

Errata.

FOl. 5. line. 10. read Pederas. f. 12. l. 10. r. Male. f. 14. l. 19. r. Chauning. f. 26. l. 3. r. Interca. f. 36. l. 3. r. Holie Wormewood. f. 38. l. 23. r. Wound-wort. f. 38. l. 25. r. Marish. f. 44. 16. Cauallirs. f. 61. l. vlt Piramides & Prismaes wanting in some Copies to be set in the Margent.

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